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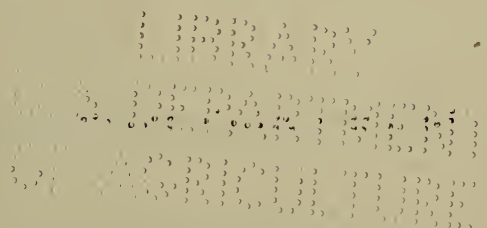


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DEPARTMENT OF AGRICULTURE

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COMBINED REPORT OF

EXPENDITURES DURING THE FISCAL YEAR 1910

APPROPRIATIONS FOR THE FISCAL YEAR 1911

AND

EXPENDITURES PROPOSED FOR THE FISCAL YEAR 1912

AS REQUIRED BY 34TH STATUTES, PAGES 1270 AND 1282

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PREPARED UNDER THE DIRECTION OF THE SECRETARY OF AGRICULTURE

By A. ZAPPONE

CHIEF OF THE DIVISION OF ACCOUNTS AND DISBURSEMENTS



JANUARY 5, 1911.—Referred to the Committee on Agriculture and ordered to be printed

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WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1911

## LETTER OF TRANSMITTAL.

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DEPARTMENT OF AGRICULTURE, OFFICE OF THE SECRETARY,

*Washington, December 27, 1910.*

SIR: As required by 34 Statutes, pages 1270 and 1282, I have the honor to transmit herewith classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910, to which, for purposes of ready comparison, has been added in parallel columns a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911.

A copy of this report has also been transmitted to the President of the Senate.

Very respectfully,

WILLIS L. MOORE,  
*Acting Secretary.*

To the SPEAKER OF THE HOUSE OF REPRESENTATIVES.

350839

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## EXPENDITURES, 1910, APPROPRIATIONS, 1911, AND ESTIMATES, 1912, DEPARTMENT OF AGRICULTURE.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911.

## OFFICE OF THE SECRETARY.

Detailed expenditures for the fiscal year ended June 30, 1910.		Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570.</i>		<i>Salaries, Office of the Secretary, 1911, \$229,870.</i>	<i>Salaries, Office of the Secretary, 1912, \$276,650.</i>
Wilson, James.....	Secretary of Agriculture, at \$12,000.....	Secretary of Agriculture.....	Secretary of Agriculture.....
Hays, W. M.....	Assistant Secretary of Agriculture, at \$5,000.....	Assistant Secretary of Agriculture.....	Assistant Secretary of Agriculture.....
McCabe, Geo. P.....	Solicitor, at \$4,500.....	1 solicitor.....	Solicitor (increase of \$500 submitted).....
Burch, S. R.....	Chief clerk, at \$2,500, and \$500 additional as custodian of buildings.....	Chief clerk, \$2,500, and \$500 additional as custodian of buildings.....	NOTE.—The following provision should be omitted as it is now permanent legislation: "And hereafter the legal work of the Department of Agriculture shall be performed under the supervision and direction of the Solicitor." Chief clerk, \$2,500, and \$500 additional as custodian of buildings.....
Wilson, Jasper.....	Private secretary to Secretary of Agriculture, at \$2,500.....	Private secretary to the Secretary of Agriculture.....	Private secretary to the Secretary of Agriculture.....
Reese, R. M.....	Stenographer and executive clerk to Secretary of Agriculture, at \$2,250.....	Stenographer and executive clerk to the Secretary of Agriculture.....	Stenographer and executive clerk to the Secretary of Agriculture.....
Hays, Marion.....	Private secretary to Assistant Secretary, at \$1,400.....	Private secretary to the Assistant Secretary of Agriculture.....	Stenographer and executive clerk to the Secretary of Agriculture.....
Knorr, Geo. W.....	Secretary, at \$1,600.....	1 appointment clerk.....	Private secretary to the Assistant Secretary of Agriculture.....
Ladd, S. M.....	Stenographer to Assistant Secretary, at \$1,400.....	1 chief of Supply Division.....	Stenographer to the Assistant Secretary of Agriculture.....
Reynolds, F. A.....	Appointment clerk, at \$2,000.....	1 inspector.....	1 appointment clerk.....
Bennett, J. B.....	Chief, Supply Division, at \$2,000.....	1 law clerk.....	1 chief of Supply Division.....
Ashley, Alex. McC.....	Inspector, at \$2,500.....	10 law clerks, at \$2,000 each.....	1 inspector.....
Boyle, C. W.....	Law clerk, at \$2,000.....	7 law clerks, at \$1,800 each.....	1 law clerk.....
Fegan, H. J.....	Law clerk, at \$2,000.....	3 law clerks, at \$1,600 each.....	10 law clerks, at \$2,000 each.....
Williams, R. W., Jr.....	Law clerk, at \$2,000.....	1 telegraph and telephone operator.....	7 law clerks, at \$1,800 each.....
Cronin, P. D.....	Law clerk, at \$1,600.....	2 clerks, class 4.....	3 law clerks, at \$1,600 each.....
McConville, A. H.....	Law clerk, at \$1,600.....	3 clerks, class 3.....	Provided, That the law clerks may be detailed by the Secretary of Agriculture for service in or out of Washington.
Gates, O. H.....	Law clerk, at \$1,600.....	6 clerks, class 2.....	1 telegraph and telephone operator (increase of \$200 submitted).....
Lethert, C. A.....	Law clerk, at \$1,600.....	10 clerks, class 1.....	2 clerks, class 4.....
Jones, W. P.....	Law clerk, at \$1,600.....	7 clerks, at \$1,000 each.....	6 clerks, class 3 (increase of 3 submitted).....
Guthridge, A. G.....	Telegraph and telephone operator, at \$1,400.....	4 clerks, at \$900 each.....	10 clerks, class 2 (increase of 4 submitted).....
Connor, George W.....	Telegraph and telephone operator, at \$1,200.....	10 clerks, messengers, or skilled laborers, at \$840 each.....	18 clerks, class 1 (increase of 8 submitted).....
Fegan, H. J.....	Clerk, class 4.....	8 clerks or laborers, at \$720 each.....	8 clerks, at \$1,000 each (increase of 1 submitted).....
Gates, O. H.....	Clerk, class 4.....	1 chief engineer, who shall be captain of the watch.....	5 clerks, at \$900 each (increase of 1 submitted).....
Roberts, R. W.....	Clerk, class 4.....	1 assistant engineer.....	10 clerks, messengers, or laborers, at \$840 each (the word "skilled" before laborers has been omitted).....
Goding, Harry.....	Clerk, class 3.....	1 engineer.....	16 clerks, assistant messengers, or laborers, at \$720 each (2 grades at same salary combined).....
Haley, Joseph.....	Clerk, class 3.....	2 assistant engineers, at \$1,000 each.....	1 chief engineer, who shall be captain of the watch (increase of \$400 submitted).....
Kelsey, F. G.....	Clerk, class 3.....	6 firemen, at \$720 each.....	1 assistant chief engineer (in lieu of 1 assistant engineer, at \$1,400).....
Pennybacker, I. S.....	Clerk, class 3.....	1 fireman.....	1 assistant engineer (in lieu of 1 engineer, at \$1,200).....
Burr, M. Helen.....	Clerk, class 2.....	4 elevator conductors, at \$720 each.....	2 assistant engineers, at \$1,000 each.....
Daly, H. J.....	Clerk, class 2.....	1 construction inspector.....	7 firemen, at \$720 each (increase of 1 submitted).....
Stone, Israel W.....	Clerk, class 2.....	1 cabinetmaker.....	NOTE.—One fireman at \$600 dropped.
Gorman, M. J.....	Clerk, class 2.....	2 cabinetmakers, at \$1,080 each.....	8 elevator conductors, at \$720 each (increase of 4 submitted, 1 by transfer from Bureau of Chemistry, 1 by transfer from Office of Roads, 1 by transfer from Division of Publications, and 1 new place).....
Green, L. H.....	Clerk, class 2.....	1 carpenter.....	1 construction inspector.....
Haley, Joseph.....	Clerk, class 2.....	1 carpenter.....	1 cabinetmaker.....
Griffith, T. E.....	Clerk, class 2.....	2 carpenters, at \$960 each.....	2 cabinetmakers, at \$1,080 each.....
Hiatt, F. H.....	Clerk, class 2.....	5 carpenters, at \$900 each.....	1 carpenter.....
Bollinger, Lewis.....	Clerk, class 1.....	2 carpenters, at \$840 each.....	1 carpenter.....
Clark, C. B.....	Clerk, class 1.....	1 electrician.....	2 carpenters, at \$960 each.....
Gladmon, P. L.....	Clerk, class 1.....	1 electrical wireman.....	5 carpenters, at \$900 each.....
Green, L. H.....	Clerk, class 1.....	2 painters, at \$900 each.....	2 carpenters, at \$840 each.....
Harrison, F. R.....	Clerk, class 1.....	1 painter.....	1 electrician.....
Knott, Laura R.....	Clerk, class 1.....	1 painter.....	1 electrical wireman.....
Polton, Emma R.....	Clerk, class 1.....	2 plumbers, at \$900 each.....	2 electrician's helpers, at \$600 each (submitted).....
Monarch, J. L.....	Clerk, class 1.....	2 plumbers, at \$840 each.....	2 painters, at \$900 each.....
Ray, T. J.....	Clerk, class 1.....	1 plumber's helper.....	1 painter.....
Timberlake, W. F.....	Clerk, class 1.....	1 blacksmith.....	1 painter.....
Wasner, W. H.....	Clerk, class 1.....	1 lieutenant of the watch.....	
Arnold, Mabel.....	Clerk, at \$1,000.....	28 watchmen, at \$720 each.....	
Boree, B. C.....	Clerk, at \$1,000.....	2 mechanics, at \$1,200 each.....	
Daniels, M. R.....	Clerk, at \$1,000.....	2 mechanics, at \$1,100 each.....	
Evans, J. P.....	Clerk, at \$1,000.....	8 assistant messengers or skilled laborers, at \$720 each.....	
Gladmon, P. L.....	Clerk, at \$1,000.....	7 assistant messengers or skilled laborers, at \$600 each.....	
Hicks, Jennie M.....	Clerk, at \$1,000.....	7 laborers, at \$600 each.....	
Hager, Peter.....	Clerk, at \$1,000.....	17 laborers, messenger boys, or charwomen, at \$480 each.....	
Polton, Emma R.....	Clerk, at \$1,000.....	1 charwoman.....	
Hines, P. A.....	Clerk, at \$1,000.....	5 charwomen, at \$240 each.....	
Imhoff, Lillie V.....	Clerk, at \$1,000.....	For extra labor and emergency employments.....	
Boree, B. C.....	Clerk, at \$900.....		
Priest, J. G.....	Clerk, at \$900.....		
Richards, W. H.....	Clerk, at \$900.....		
Breeding, Louise.....	Clerk, at \$900.....		
Echtermann, A. M.....	Clerk, at \$900.....		
Lynch, John T.....	Clerk, at \$900.....		
Brooks, A. H.....	Clerk, messenger, or skilled laborer, at \$840.....		
Dixon, W. D.....	Clerk, messenger, or skilled laborer, at \$840.....		
Hicks, Jennie M.....	Clerk, messenger, or skilled laborer, at \$840.....		
McNaught, Arch., Jr.....	Clerk, messenger, or skilled laborer, at \$840.....		
Elmore, A. L.....	Clerk, messenger, or skilled laborer, at \$840.....		
Gaskins, John H.....	Clerk, messenger, or skilled laborer, at \$840.....		
Hager, Peter.....	Clerk, messenger, or skilled laborer, at \$840.....		
Johnson, Victorine E.....	Clerk, messenger, or skilled laborer, at \$840.....		
Mason, J. A.....	Clerk, messenger, or skilled laborer, at \$840.....		
Skidmore, J. F.....	Clerk, messenger, or skilled laborer, at \$840.....		
		Total amount of above appropriation (an increase over 1910 of \$55,300).....	

## EXPENDITURES, APPROPRIATIONS, AND ESTIMATES, DEPARTMENT OF AGRICULTURE.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570—Continued.</i>	<i>Salaries, Office of the Secretary, 1911, \$229,870—Continued.</i>	<i>Salaries, Office of the Secretary, 1912, \$276,650—Continued.</i>
Thorpe, J. A..... Clerk, messenger, or skilled laborer, at \$840.....	\$840.00	4 plumbers or steam fitters, at \$900 each (in lieu of 2 plumbers at \$900 each, and 2 plumbers at \$840 each, with increase of \$60 each in the latter case).....
Williams, Jos..... Clerk, messenger, or skilled laborer, at \$840.....	821.34	2 plumber's helpers, at \$600 each (increase of 1 submitted).....
Young, J. W..... Clerk, messenger, or skilled laborer, at \$840.....	814.33	1 blacksmith.....
Cookman, Benjamin C..... Clerk or laborer, at \$720.....	180.00	1 lieutenant of the watch.....
Walsh, H. A..... Clerk or laborer, at \$720.....	466.00	34 watchmen, at \$720 each (increase of 6 submitted).....
Dixon, W. D..... Clerk or laborer, at \$720.....	368.00	2 mechanics, at \$1,200 each.....
Grau, E. G..... Clerk or laborer, at \$720.....	352.00	2 mechanics, at \$1,100 each.....
Jauch, Daniel..... Clerk or laborer, at \$720.....	720.00	1 janitor (submitted).....
Joyce, J. V..... Clerk or laborer, at \$720.....	720.00	18 assistant messengers or laborers, at \$600 each (2 grades at same salary combined, and increase of 4 new places submitted).....
King, E. C..... Clerk or laborer, at \$720.....	720.00	21 laborers, messenger boys, or charwomen, at \$480 each (increase of 4 submitted).....
Rapier, J. H..... Clerk or laborer, at \$720.....	720.00	1 charwoman.....
Rouser, C. E..... Clerk or laborer, at \$720.....	720.00	8 charwomen, at \$240 each (increase of 3 submitted).....
Watskey, Jake..... Clerk or laborer, at \$720.....	720.00	For extra labor and emergency employments (increase of \$8,600 submitted).....
Jones, Lewis..... Chief engineer, at \$1,600.....	1,600.00	
Corwin, S. W..... Assistant engineer, at \$1,400.....	1,400.00	Total amount estimated (an apparent increase over 1911 of \$46,780)....
McGregor, J. M..... Assistant engineer, at \$1,000.....	1,000.00	276,650.00
Troy, J. D..... Assistant engineer, at \$1,000.....	1,000.00	
Kirksey, William..... Fireman, at \$720.....	158.00	NOTE 1.—There is an apparent increase in the above appropriation of \$46,780, but deducting the salaries of 3 elevator conductors transferred from other bureaus amounting to \$2,160, which amount has been deducted from the appropriation of those bureaus, there is an actual increase of \$44,620. Of this sum \$35,400 is for new places to meet the additional needs of the Secretary's office. There has been no increase in clerical help in that office during the past 2 years, such clerical help having been obtained by detail from the various bureaus; \$1,220 is for promotions, of which sum \$500 is to increase the salary of the Solicitor. The work devolving upon that officer has greatly increased. The chief law officers of other departments (except the War and Navy Departments, where the chief law officer receives the pay of his rank) are paid \$5,000 a year, and the Department of Agriculture is the only department where the chief law officer receives only \$4,500 per annum. The changes in detail are as follows:
Moffit, A. W..... Fireman, at \$720.....	562.00	New places:
Ross, W. H..... Fireman, at \$720.....	720.00	3 clerks, class 3.....
Tavenner, P. R..... Fireman, at \$720.....	720.00	4 clerks, class 2.....
Williams, J. S..... Fireman, at \$720.....	720.00	8 clerks, class 1.....
Grant, C. C..... Elevator conductor, at \$720.....	574.00	1 clerk.....
Lang, Henry E..... Elevator conductor, at \$720.....	132.00	1 clerk.....
Haardt, H. F..... Elevator conductor, at \$720.....	120.00	1 fireman.....
Wycks, Daniel L..... Elevator conductor, at \$720.....	560.00	1 elevator conductor.....
Newman, H. M..... Elevator conductor, at \$720.....	720.00	2 electrician's helpers, at \$600 each.....
Ware, Alonzo..... Elevator conductor, at \$720.....	720.00	1 plumber's helper.....
Eaton, L. F..... Construction inspector, at \$1,200.....	1,200.00	6 watchmen, at \$720 each.....
Halley, James..... Cabinetmaker, at \$1,100.....	1,100.00	1 janitor.....
Blair, S. C..... Carpenter, at \$1,000.....	1,000.00	4 assistant messengers or laborers, at \$600 each.....
Augusterfer, Raymond..... Electrician, at \$1,000.....	336.11	4 laborers, messenger boys, or charwomen, at \$480 each.....
O'Shea, Alexander..... Electrical wireman, at \$900.....	622.23	3 charwomen, at \$240 each... ..
Cox, G. E..... Painter, at \$900.....	900.00	Promotions:
Carter, G. A..... Painter, at \$900.....	900.00	Solicitor.....
Smith, A. J..... Painter, at \$720.....	719.00	Telegraph and telephone operator.....
Kerr, J. K., jr..... Plumber, at \$900.....	900.00	Chief engineer, who shall be captain of the watch.....
Weldman, C. S..... Blacksmith, at \$840.....	840.00	2 plumbers or steam fitters, at \$60 each.....
Cooke, R. H..... Lieutenant of the watch, at \$1,000.....	1,000.00	
Arnold, R. H..... Watchman, at \$720.....	720.00	
Bean, Clarence..... Watchman, at \$720.....	720.00	
Boardman, J. M..... Watchman, at \$720.....	720.00	
Byrnes, D. J..... Watchman, at \$720.....	592.00	
McDonald, Joseph..... Watchman, at \$720.....	60.00	
Woodward, Otho J..... Watchman, at \$720.....	60.00	
Carter, W. H..... Watchman, at \$720.....	720.00	
Cassell, A. C..... Watchman, at \$720.....	720.00	
Croghan, C. J..... Watchman, at \$720.....	720.00	
Disney, R. H..... Watchman, at \$720.....	376.00	
Kelley, M. C..... Watchman, at \$720.....	330.00	
Fairfax, Thad..... Watchman, at \$720.....	720.00	
Garrett, C. W..... Watchman, at \$720.....	720.00	
Gordon, J. H..... Watchman, at \$720.....	720.00	
Graser, S. O..... Watchman, at \$720.....	720.00	
Groesbeck, D. V. H..... Watchman, at \$720.....	720.00	
Hall, G. I..... Watchman, at \$720.....	720.00	
Hodges, A. J..... Watchman, at \$720.....	720.00	
Kite, A. H..... Watchman, at \$720.....	600.00	
McMahan, G. A..... Watchman, at \$720.....	120.00	
McDonald, Joseph..... Watchman, at \$720.....	54.00	
Moor, Wm. H..... Watchman, at \$720.....	658.00	
Morton, E. C..... Watchman, at \$720.....	720.00	
Mott, H. S..... Watchman, at \$720.....	720.00	
Perry, O. K..... Watchman, at \$720.....	720.00	
Phipps, W. H..... Watchman, at \$720.....	720.00	
Rutledge, Thos..... Watchman, at \$720.....	720.00	
Ryon, M. F..... Watchman, at \$720.....	720.00	
Scanlon, Patrick..... Watchman, at \$720.....	720.00	
Sprague, Frank..... Watchman, at \$720.....	720.00	
Thompson, J. H..... Watchman, at \$720.....	720.00	
Kendrick, H. M..... Mechanic, at \$1,200.....	1,200.00	
Harrison, M. L..... Mechanic, at \$1,100.....	1,100.00	
Harvey, C. D..... Mechanic, at \$1,100.....	1,100.00	
Bennett, A. L..... Assistant messenger or skilled laborer, at \$720.....	36.00	
Priest, J. G..... Assistant messenger or skilled laborer, at \$720.....	600.00	
Dahler, A. L..... Assistant messenger or skilled laborer, at \$720.....	720.00	
Fagan, G. M..... Assistant messenger or skilled laborer, at \$720.....	420.00	
Schwab, A. R..... Assistant messenger or skilled laborer, at \$720.....	300.00	
Hoffman, G. L..... Assistant messenger or skilled laborer, at \$720.....	522.00	
Moise, D. O..... Assistant messenger or skilled laborer, at \$720.....	144.00	
Morgan, R. H..... Assistant messenger or skilled laborer, at \$720.....	720.00	
Richards, W. H..... Assistant messenger or skilled laborer, at \$720.....	660.00	
Rutledge, H. W..... Assistant messenger or skilled laborer, at \$720.....	36.00	
Bennett, A. L..... Assistant messenger or skilled laborer, at \$600.....	126.67	
Wilson, Myron W..... Assistant messenger or skilled laborer, at \$600.....	365.00	
Brooks, C. H..... Assistant messenger or skilled laborer, at \$600.....	600.00	
Davis, R. N..... Assistant messenger or skilled laborer, at \$600.....	225.00	
Jones, R. S..... Assistant messenger or skilled laborer, at \$600.....	15.00	
Schwab, A. R..... Assistant messenger or skilled laborer, at \$600.....	350.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570—Continued.</i>		
Disney, R. H. .... Assistant messenger or skilled	\$286.67	
Phillips, O. A. .... laborer, at \$600	293.33	
Fairfax, Lucie E. .... Assistant messenger or skilled	260.00	
Grau, E. G. .... laborer, at \$600	306.67	
Truxell, J. M. .... Assistant messenger or skilled		
	laborer, at \$600	600.00
Barnes, C. L. .... Laborer, at \$600	600.00	
Burton, John .... Laborer, at \$600	600.00	
Fitzhugh, W. H. .... Laborer, at \$600	600.00	
Gscheidle, W. L. .... Laborer, at \$600	175.00	
Phillips, O. A. .... Laborer, at \$600	100.00	
Phillips, Wm. L. .... Laborer, at \$600	250.00	
Hill, William .... Laborer, at \$600	600.00	
Hiltz, Walter I. .... Laborer, at \$600	456.67	
Slaughter, N. H. .... Laborer, at \$600	113.33	
Syphax, C. .... Laborer, at \$600	600.00	
Anthony, Maria. .... Laborer, at \$480	480.00	
Barrett, Martha. .... Laborer, at \$480	480.00	
Bundy, E. W. .... Laborer, at \$480	366.67	
Smith, Enos B. .... Laborer, at \$480	106.67	
Butler, C. J. .... Laborer, at \$480	480.00	
Chapman, J. E. .... Laborer, at \$480	480.00	
Cook, Ida A. .... Laborer, at \$480	480.00	
Cross, M. C. .... Laborer, at \$480	480.00	
Kelly, Mary. .... Laborer, at \$480	21.33	
Kenner, Hiram. .... Laborer, at \$480	310.67	
Smith, D. R. .... Laborer, at \$480	40.00	
Watson, Charles. .... Laborer, at \$480	68.00	
Marshall, Luler. .... Laborer, at \$480	480.00	
Meek, Belle. .... Laborer, at \$480	480.00	
Myers, S. E. .... Laborer, at \$480	480.00	
O'Rourke, Estelle L. .... Laborer, at \$480	480.00	
Perkins, Virginia. .... Laborer, at \$480	480.00	
Sontag, K. E. .... Laborer, at \$480	480.00	
Stewart, W. H. .... Laborer, at \$480	480.00	
Toulson, C. H. .... Laborer, at \$480	480.00	
Gilmore, John P. .... Messenger boy, at \$480	54.67	
Oakley, Jas. F. .... Messenger boy, at \$480	398.66	
Williams, Max. .... Charwoman, at \$540	20.00	
Boss, Martha. .... Charwoman, at \$540	540.00	
Bryant, Addie B. .... Charwoman, at \$240	240.00	
De Atley, Phebe. .... Charwoman, at \$240	235.99	
Lawson, Henrietta V. .... Charwoman, at \$240	240.00	
Shannon, Clara. .... Charwoman, at \$240	240.00	
Webster, Rosa E. .... Charwoman, at \$240	240.00	
Extra laborers and emergency employments, \$7,600:		
Fisher, Gertrude. .... Clerk, at \$1,200	98.33	
Kebesky, Ben. .... Stenographer and typewriter, at \$1,200	98.32	
O'Neil, Frank. .... Stenographer and typewriter, at \$1,200	98.33	
Sands, Maurice E. .... Stenographer and typewriter, at \$1,200	100.00	
Oyster, F. E. .... Draftsman, at \$1,200	190.00	
Condron, Gertrude C. .... Clerk, stenographer, and typewriter, at \$1,000	188.89	
Hoffman, George L. .... Minor clerk, at \$900	22.50	
Callow, Robert R. .... Plumber, at \$4 per diem	258.00	
Morlarity, J. D. .... Plumber, at \$4 per diem	82.00	
Bugbee, James H. .... Plumber's helper, at \$600	150.00	
Dwyer, Laurence F. .... Plumber's helper, at \$600	15.00	
Madigan, Thomas. .... Plumber's helper, at \$50 per month	200.00	
Grass, W. F. .... Cabinetmaker, at \$3.50 per diem	952.00	
Kesler, William T. .... Cabinetmaker, at \$1,080	360.00	
Tronsue, Elisha D. .... Carpenter, at \$3.50 per diem	796.25	
Hollidge, Alfred H. .... Carpenter, at \$960	320.00	
Cockrille, Herbert P. .... Carriage painter, at \$840	201.83	
Corridon, John S. .... Skilled laborer, at \$840	28.00	
Connell, John. .... Blacksmith's helper, at \$2 per diem	24.00	
Gscheidle, Wm. L. .... Blacksmith's helper, at \$2 per diem	26.00	
Homan, Aquilla C. .... Painter, at \$3.50 per diem and \$900 per annum	860.00	
Phillips, Oscar A. .... Painter, at \$40 per month	120.00	
McDonald, Joseph. .... Watchman, at \$720	28.00	
Moss, Nathaniel. .... Unskilled laborer, at \$2 per diem	24.00	
Quisendury, Lloyd. .... Unskilled laborer, at \$2 per diem	24.00	
Robinson, Lex. .... Unskilled laborer, at \$2 per diem	24.00	
Willis, N. .... Unskilled laborer, at \$2 per diem	24.00	
Kenner, Hiram. .... Unskilled laborer, at \$1.50 per diem	79.50	
Landon, Edward. .... Unskilled laborer, at \$1.50 per diem	232.50	
Pleasant, Samuel. .... Unskilled laborer, at \$1.50 per diem	409.50	
Scott, P. P. .... Unskilled laborer, at \$1.50 per diem	81.00	
Smith, Enos B. .... Unskilled laborer, at \$1.50 per diem	52.50	
		Extra labor and emergency employments: Increase submitted..... \$8,600.00
		45,220.00
		Places dropped: 1 fireman..... 600.00
		44,620.00
		Places transferred from the bureaus, the appropriations of those bureaus being reduced accordingly:
		1 elevator conductor from Bureau of Chemistry..... \$720.00
		1 elevator conductor from Office of Public Roads..... 720.00
		1 elevator conductor from Division of Publications..... 720.00
		2,160.00
		46,780.00

## EXPENDITURES, APPROPRIATIONS, AND ESTIMATES, DEPARTMENT OF AGRICULTURE.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (84 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570—Continued.</i>	<i>Salaries, Office of the Secretary, 1911, \$229,870—Continued.</i>	<i>Salaries, Office of the Secretary, 1912, \$276,650—Continued.</i>
Watson, Charles..... Unskilled laborer, at \$1.50 per diem.....		
\$15.75		
Bell, Ulysses G..... Skilled laborer, at \$1.50 per diem.....		
112.50		
Brown, Robert A..... Skilled laborer, at \$1.50 per diem.....		
118.50		
Coates, Raymond..... Skilled laborer, at \$1.50 per diem.....		
117.00		
Harrover, W. J..... Skilled laborer, at \$1.50 per diem.....		
115.50		
Shaver, D. V..... Skilled laborer, at \$1.50 per diem.....		
117.00		
Cruse, Isaac..... Laborer, at \$1.50 per diem.....		
105.00		
Kelly, Mary..... Laborer, at \$480.....		
368.00		
Allen, Victoria E..... Charwoman, at \$240.....		
16.67		
Franklin, Julia R..... Charwoman, at \$240.....		
28.00		
Morse, Mary E..... Charwoman, at \$240.....		
16.67		
Total.....		
172,033.43		
Unexpended balance.....		
2,536.57		
<b>Total amount of above appropriation..... 174,570.00</b>		
The above force performed the following duties:	The above force is performing the following duties:	The above force will perform the following duties:
Administrative and executive:	Administrative and executive:	Administrative and executive:
Secretary of Agriculture..... 12,000.00	Secretary of Agriculture..... \$12,000.00	Secretary of Agriculture..... \$12,000.00
Assistant Secretary of Agriculture..... 5,000.00	Assistant Secretary of Agriculture..... 5,000.00	Assistant Secretary of Agriculture..... 5,000.00
Chief clerk and custodian of buildings..... 3,000.00	Chief clerk and custodian of buildings..... 3,000.00	Chief clerk and custodian of buildings..... 3,000.00
Private secretary to the Secretary of Agriculture..... 2,500.00	Private secretary to the Secretary of Agriculture..... 2,500.00	Private secretary to the Secretary of Agriculture..... 2,500.00
Private secretary to the Assistant Secretary of Agriculture..... 1,600.00	Private secretary to the Assistant Secretary of Agriculture..... 1,600.00	Private secretary to the Assistant Secretary of Agriculture..... 1,600.00
Stenographer and executive clerk to the Secretary of Agriculture..... 2,250.00	Stenographer and executive clerk to the Secretary of Agriculture..... 2,250.00	Stenographer and executive clerk to the Secretary of Agriculture..... 2,250.00
Stenographer to the Assistant Secretary of Agriculture..... 1,400.00	Stenographer to the Assistant Secretary of Agriculture..... 1,400.00	Stenographer to the Assistant Secretary of Agriculture..... 1,400.00
1 inspector..... 2,500.00	1 inspector..... 2,500.00	1 inspector..... 2,500.00
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
2 messengers, at \$840..... 1,680.00	2 messengers, at \$840..... 1,680.00	2 messengers, at \$840..... 1,680.00
1 assistant messenger..... 720.00	1 assistant messenger..... 720.00	1 assistant messenger..... 720.00
<b>34,250.00</b>	<b>35,650.00</b>	<b>38,250.00</b>
Office of the Solicitor:	Office of the Solicitor:	Office of the Solicitor:
1 solicitor..... 4,500.00	1 solicitor..... 4,500.00	1 solicitor..... 5,000.00
2 law clerks, at \$2,000..... 4,000.00	1 law clerk..... 2,500.00	1 law clerk..... 2,500.00
3 law clerks, at \$1,600..... 4,800.00	10 law clerks, at \$2,000..... 20,000.00	10 law clerks, at \$2,000..... 20,000.00
1 clerk, class 4..... 1,800.00	7 law clerks, at \$1,800..... 12,600.00	7 law clerks, at \$1,800..... 12,600.00
1 clerk, class 3..... 1,600.00	3 law clerks, at \$1,600..... 4,800.00	3 law clerks, at \$1,600..... 4,800.00
1 clerk, class 2..... 1,400.00	1 law clerk..... 1,200.00	1 law clerk..... 1,200.00
4 clerks, class 1..... 4,800.00	1 expert..... 1,600.00	1 expert..... 1,600.00
1 assistant messenger..... 720.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
	1 clerk, class 3..... 1,600.00	3 clerks, class 3..... 4,800.00
	5 clerks, class 2..... 7,000.00	4 clerks, class 2..... 5,600.00
	6 clerks, class 1..... 7,200.00	10 clerks, class 1..... 12,000.00
	2 stenographers and typewriters, at \$1,200..... 2,400.00	1 clerk..... 1,000.00
	1 clerk..... 900.00	1 clerk, assistant messenger, or laborer..... 720.00
	1 clerk or laborer..... 720.00	1 assistant messenger or laborer..... 600.00
	1 assistant messenger..... 600.00	
<b>23,620.00</b>	<b>69,420.00</b>	<b>74,220.00</b>
Appointment Division:	Appointment Division:	Appointment Division:
1 appointment clerk..... 2,000.00	1 appointment clerk..... 2,000.00	1 appointment clerk..... 2,000.00
1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
2 clerks, class 2..... 2,800.00	2 clerks, class 2..... 2,800.00	2 clerks, class 2..... 2,800.00
1 clerk, class 1..... 1,200.00	2 clerks, class 1..... 2,400.00	2 clerks, class 1..... 2,400.00
3 clerks, at \$1,000..... 3,000.00	2 clerks, at \$1,000..... 2,000.00	2 clerks, at \$1,000..... 2,000.00
2 clerks, at \$900..... 1,800.00	3 clerks, at \$900..... 2,700.00	3 clerks, at \$900..... 2,700.00
2 assistant messengers, at \$720..... 1,440.00	2 assistant messengers, at \$720..... 1,440.00	2 clerks, assistant messengers, or laborers, at \$720..... 1,440.00
1 assistant messenger..... 600.00		
<b>16,240.00</b>	<b>16,740.00</b>	<b>16,740.00</b>

NOTE.—The increase in the office of the Solicitor is due to the fact that beginning with this fiscal year all of the law clerks of the Forest Service located in the district offices were transferred to the statutory roll of the office of the Secretary.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570—Continued.</i>	<i>Salaries, Office of the Secretary, 1911, \$229,870—Continued.</i>	<i>Salaries, Office of the Secretary, 1912, \$276,650—Continued.</i>
The following were under the immediate supervision of the chief clerk of the department:	The following are under the immediate supervision of the chief clerk of the department:	The following will be under the immediate supervision of the chief clerk of the department:
<b>Supply Division:</b>	<b>Supply Division:</b>	<b>Supply Division:</b>
1 Chief of Supply Division .....	1 Chief of Supply Division ...	1 Chief of Supply Division ..
1 clerk, class 2 .....	1 clerk, class 2 .....	1 clerk, class 2 .....
2 clerks, class 1 .....	2 clerks, class 1 .....	2 clerks, class 1 .....
1 clerk .....	1 clerk .....	1 clerk .....
1 clerk .....	1 clerk .....	1 clerk .....
1 laborer .....	1 laborer .....	1 assistant messenger or laborer .....
8,120.00	8,300.00	8,300.00
<b>Post Office:</b>	<b>Post Office:</b>	<b>Post Office:</b>
1 clerk, class 1 .....	1 clerk, class 1 .....	1 clerk, class 1 .....
1 clerk .....	1 clerk .....	1 clerk .....
1 clerk or laborer .....	1 clerk or laborer .....	2 clerks, assistant messengers or laborers, at \$720 .....
1 assistant messenger .....	1 assistant messenger .....	
3,520.00	3,640.00	3,640.00
<b>File room and time clerks:</b>	<b>File room and time clerks:</b>	<b>File room and time clerks:</b>
2 clerks, class 2 .....	1 clerk, class 3 .....	1 clerk, class 3 .....
1 clerk, class 1 .....	1 clerk, class 1 .....	1 clerk, class 1 .....
2 clerks, at \$1,000 .....	2 clerks, at \$1,000 .....	2 clerks, at \$1,000 .....
2 clerks, at \$840 .....	3 clerks, at \$840 .....	3 clerks, messengers or laborers, at \$840 .....
1 messenger .....		
8,520.00	7,320.00	7,320.00
<b>Telegraph and telephone section:</b>	<b>Telegraph and telephone section:</b>	<b>Telegraph and telephone section:</b>
1 telegraph and telephone operator .....	1 telegraph and telephone operator .....	1 telegraph and telephone operator .....
1 telegraph and telephone operator .....	1 telegraph and telephone operator .....	1 telegraph and telephone operator .....
1 clerk, class 2 .....	1 clerk .....	1 clerk .....
1 clerk .....		
4,900.00	3,600.00	3,800.00
<b>Mechanical shop employees, engineers, watchmen, messengers, laborers, charwomen, etc.:</b>	<b>Mechanical shop employees, engineers, watchmen, messengers, laborers, charwomen, etc.:</b>	<b>Mechanical shop employees, engineers, watchmen, messengers, laborers, charwomen, etc.:</b>
1 chief engineer, who shall be captain of the watch .....	1 chief engineer, who shall be captain of the watch .....	1 chief engineer, who shall be captain of the watch .....
1 assistant engineer .....	1 assistant engineer .....	1 assistant chief engineer .....
2 assistant engineers, at \$1,000 .....	1 engineer .....	1 assistant engineer .....
4 firemen, at \$720 .....	2 assistant engineers, at \$1,000 .....	2 assistant engineers, at \$1,000 .....
4 elevator conductors, at \$720 .....	6 firemen, at \$720 .....	7 firemen, at \$720 .....
1 lieutenant of the watch .....	1 fireman .....	8 elevator conductors, at \$720 .....
26 watchmen, at \$720 .....	4 elevator conductors, at \$720 .....	1 lieutenant of the watch .....
1 construction inspector .....	1 lieutenant of the watch .....	34 watchmen, at \$720 .....
1 mechanic .....	28 watchmen, at \$720 .....	1 construction inspector .....
2 mechanics, at \$1,100 .....	1 construction inspector .....	2 mechanics, at \$1,200 .....
1 cabinetmaker .....	2 mechanics, at \$1,200 .....	2 mechanics, at \$1,200 .....
1 carpenter .....	2 mechanics, at \$1,100 .....	1 cabinetmaker .....
1 electrician .....	1 cabinetmaker .....	2 cabinetmakers, at \$1,080 .....
1 electrical wireman .....	2 cabinetmakers, at \$1,080 .....	1 carpenter .....
1 plumber .....	1 carpenter .....	2 carpenters, at \$900 .....
1 painter .....	2 carpenters, at \$900 .....	5 carpenters, at \$900 .....
1 painter .....	2 carpenters, at \$840 .....	2 carpenters, at \$840 .....
1 blacksmith .....	1 electrician .....	1 electrician .....
1 clerk, class 1 .....	1 electrical wireman .....	1 electrical wireman .....
4 clerks, messengers, or laborers, at \$840 .....	2 plumbers, at \$900 .....	2 electrician's helpers, at \$600 .....
6 clerks, or laborers, at \$720 .....	1 plumber's helper .....	4 plumbers or steamfitters, at \$900 .....
6 laborers, at \$600 .....	2 painters, at \$900 .....	3,600.00
2 assistant messengers or skilled laborers, at \$720 .....	1 painter .....	2 plumber's helpers, at \$600 .....
4 assistant messengers or skilled laborers, at \$600 .....	1 painter .....	2 painters, at \$900 .....
17 laborers, messenger boys, or charwomen, at \$480 .....	1 blacksmith .....	1 painter .....
1 charwoman .....	1 clerk, class 1 .....	1 blacksmith .....
5 charwomen at \$240 .....	5 clerks, messengers, or laborers, at \$840 .....	1 janitor .....
	6 clerks or laborers, at \$720 .....	5 clerks, messengers, or laborers, at \$840 .....
	5 laborers, at \$600 .....	10 clerks, assistant messengers or laborers, at \$720 .....
	4 assistant messengers or skilled laborers, at \$720 .....	14 assistant messengers, or laborers, at \$600 .....
	1 messenger .....	21 laborers, messenger boys, or charwomen, at \$480 .....
	5 assistant messengers or skilled laborers, at \$600 .....	1 charwoman .....
	16 laborers, messenger boys, or charwomen, at \$480 .....	8 charwomen, at \$240 .....
	1 charwoman .....	
	5 charwomen, at \$240 .....	
68,660.00	93,220.00	108,680.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of the Secretary, 1910, \$174,570—Continued.</i>	<i>Salaries, Office of the Secretary, 1911, \$229,870—Continued.</i>	<i>Salaries, Office of the Secretary, 1912, \$276,650—Continued.</i>
The following were under the immediate supervision of the chief clerk of the department—cont'd.	The following are under the immediate supervision of the chief clerk of the department—cont'd.	The following will be under the immediate supervision of the chief clerk of the department—cont'd.
Detailed from Secretary's office to various bureaus:	Detailed from Secretary's office to various bureaus:	Detailed from Secretary's office to various bureaus:
1 clerk..... \$900.00	1 clerk, class 2..... \$1,400.00	1 clerk, class 2..... \$1,400.00
1 clerk..... 840.00	1 clerk..... 900.00	1 clerk..... 900.00
	1 assistant messenger..... 600.00	2 assistant messengers or laborers, at \$600..... 1,200.00
	1 laborer..... 600.00	
	1 messenger boy..... 480.00	
	3,980.00	3,500.00
Extra laborers, emergency employment, and pay of rents.. 1,740.00	Extra laborers, emergency employment, and pay of rents \$7,600 (less \$900 included above as a clerk under office of the Solicitor)..... 6,700.00	Extra laborers, emergency employment, and pay of rents.... 16,200.00
	6,700.00	
Total..... 177,170.00	Total..... 248,570.00	Total..... 280,650.00
NOTE.—Of the above the following were detailed to the office of the Secretary by the various bureaus:	NOTE.—Of the above the following are detailed to the office of the Secretary by the various bureaus:	NOTE.—Of the above the following will be detailed to the office of the Secretary by the various bureaus:
1 clerk, class two..... \$1,400.00	1 messenger..... \$600.00	1 expert..... \$1,600.00
1 clerk, class one..... 1,200.00	1 clerk, class three..... 1,600.00	1 law clerk..... 1,200.00
	4 clerks, class two..... 5,600.00	1 telegraph and telephone operator..... 1,200.00
	3 clerks, class one..... 3,600.00	
	2 stenographers and typewriters, at \$1,200..... 2,400.00	
	1 expert..... 1,600.00	
	1 law clerk..... 1,200.00	
	1 telephone and telegraph operator..... 1,200.00	
	1 clerk..... 900.00	
	18,700.00	4,000.00
	229,870.00	276,650.00
174,570.00		
(No appropriation for the fiscal year 1910.)	<i>Enforcement of the insecticide act, 1911, \$50,000.</i>	<i>Enforcement of the insecticide act, 1912, \$87,000.</i>
	Lump-fund salaries in Washington..... \$4,000.00	Lump-fund salaries in Washington..... \$8,000.00
	Lump-fund salaries outside of Washington..... 6,000.00	Lump-fund salaries outside of Washington..... 15,000.00
	Stationery..... 500.00	Stationery..... 1,000.00
	Miscellaneous supplies and services, equipment, books, machinery, etc..... 17,700.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 25,000.00
	Furniture..... 500.00	Furniture..... 1,100.00
	Freight..... 50.00	Freight..... 200.00
	Express..... 100.00	Express..... 300.00
	Telegraph..... 100.00	Telegraph..... 300.00
	Telephone..... 50.00	Telephone..... 100.00
	Apparatus, instruments, and laboratory material..... 10,000.00	Apparatus, instruments, and laboratory material..... 21,000.00
	Travel and station and field expenses..... 11,000.00	Travel and station and field expenses..... 15,000.00
	Total amount estimated... 50,000.00	Total amount estimated (an increase over 1911 of \$87,000)..... 87,000.00
	NOTE.—The above estimate of \$50,000 is to enable the Secretary of Agriculture to enforce the provisions of the insecticide act during the period from Jan. 1, 1911, the date the law becomes effective, to June 30, 1912, and has been submitted for inclusion in the urgent deficiency bill.	NOTE.—The above estimate of \$87,000 is to enable the Secretary of Agriculture to enforce the provisions of the insecticide act during the fiscal year ending June 30, 1912.
	REMARKS.	REMARKS.
	As required by the act, uniform rules and regulations for its enforcement have been prepared and adopted by the Secretary of the Treasury, the Secretary of Commerce and Labor, and the Secretary of Agriculture. The details of the work to be carried on during the remainder of the fiscal year 1911 have not been worked out as yet, and a statement of proposed expenditures by projects is therefore not possible at the time of the preparation of this report. It is contemplated, however, to allot the appropriation, when made, to the Bureau of Animal Industry, the Bureau of	During the fiscal year 1912 the work begun in the previous fiscal year will be developed and extended along lines similar to those indicated under the fiscal year 1911.

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of the Secretary—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
(No appropriation for the fiscal year 1910)—Continued.	<i>Enforcement of the insecticide act, 1911, \$50,000—Continued.</i>	<i>Enforcement of the insecticide act, 1912, \$87,000—Continued.</i>
<i>Buildings, Department of Agriculture (\$1,500,000), balance available July 1, 1909, \$1,251.10.</i>	Plant Industry, the Bureau of Chemistry, and the Bureau of Entomology, under which bureaus the work assigned to the Department of Agriculture by the act will be performed along lines similar to those followed in the enforcement of the food and drugs act.	
Miscellaneous supplies, equipment, etc..... \$968.15		
Express..... .25		
Total expenditures during fiscal year 1910..... 968.40		
Balance to be turned back in Treasury (estimated)..... 282.70		
Total amount of above appropriation (available July 1, 1909)..... 1,251.10		

## WEATHER BUREAU.

<i>Salaries, Office of Chief of Weather Bureau, \$205,310.</i>	<i>Salaries, Office of Chief of Weather Bureau, \$206,150.</i>	<i>Salaries, Weather Bureau, \$342,800.</i> (For duty in the city of Washington and elsewhere.)
Moore, Willis L..... Chief of bureau, at \$6,000..... \$6,000.00	1 chief of bureau..... \$6,000.00	1 chief of bureau..... \$6,000.00
Williams, H. E..... Assistant chief of bureau, at \$3,000..... 3,000.00	1 assistant chief of bureau..... 3,000.00	1 assistant chief of bureau..... 3,000.00
Carroll, D. J..... Chief clerk, at \$2,250..... 2,250.00	1 chief clerk..... 2,250.00	1 chief of division..... 2,750.00
Church, John P..... Chief of division, at \$2,000..... 2,000.00	4 chiefs of division, at \$2,000 each..... 8,000.00	2 inspectors, at \$2,500 each..... 5,000.00
Heiskell, Henry L..... Chief of division, at \$2,000..... 2,000.00	1 librarian..... 2,000.00	1 chief clerk..... 2,750.00
Robinson, J. H..... Chief of division, at \$2,000..... 2,000.00	7 clerks, class 4..... 12,600.00	4 chiefs of division, at \$2,000 each..... 8,000.00
Seyboth, Robert..... Chief of division, at \$2,000..... 2,000.00	7 clerks, class 3..... 11,200.00	1 librarian..... 2,000.00
Talman, Charles F..... Librarian, at \$2,000..... 2,000.00	18 clerks, class 2..... 25,200.00	8 clerks, class 4..... 14,400.00
Ashton, John C..... Clerk, class 4..... 1,800.00	27 clerks, class 1..... 32,400.00	9 clerks, class 3..... 14,400.00
Day, Preston C..... Clerk, class 4..... 1,800.00	18 clerks, at \$1,000 each..... 18,000.00	19 clerks, class 2..... 26,600.00
Hunt, George E..... Clerk, class 4..... 1,800.00	9 clerks, at \$900 each..... 8,100.00	29 clerks, class 1..... 34,800.00
Jones, J. H..... Clerk, class 4..... 1,800.00	4 copyists or typewriters, at \$840 each..... 3,360.00	19 clerks, at \$1,000 each..... 19,000.00
Marling, D. T..... Clerk, class 4..... 1,800.00	1 copyist or typewriter..... 720.00	9 clerks, at \$900 each..... 8,100.00
Moore, Theodore T..... Clerk, class 4..... 1,800.00	2 assistant foremen of division, at \$1,600 each..... 3,200.00	4 copyists or typewriters, at \$840 each..... 3,360.00
Stewart, John C..... Clerk, class 4..... 1,800.00	1 proof reader..... 1,400.00	1 copyist or typewriter..... 720.00
Bennett, M. C..... Clerk, class 3..... 1,600.00	1 chief mechanic..... 1,400.00	1 operator..... 1,200.00
Beuter, Sophia A..... Clerk, class 3..... 1,600.00	1 lithographer..... 1,300.00	2 assistant foremen of division, at \$1,600 each..... 3,200.00
Blundon, Benjamin A..... Clerk, class 3..... 1,600.00	3 lithographers, at \$1,200 each..... 3,600.00	4 monotype operators, who shall also be compositors, at \$1,500 each..... 6,000.00
Easton, Edward C..... Clerk, class 3..... 1,600.00	2 pressmen, at \$1,250 each..... 2,500.00	1 monotype machinist..... 1,500.00
Foy, John T..... Clerk, class 3..... 1,600.00	10 compositors, at \$1,250 each..... 12,500.00	1 proof reader..... 1,400.00
Pugh, T. O..... Clerk, class 3..... 1,600.00	1 skilled mechanic..... 1,200.00	1 lithographer..... 1,500.00
Smith, G. W..... Clerk, class 3..... 1,600.00	6 skilled mechanics, at \$1,000 each..... 6,000.00	3 lithographers, at \$1,200 each..... 3,600.00
Abbe, Cleveland, Jr..... Clerk, class 2..... 1,400.00	1 engineer..... 1,200.00	2 pressmen, at \$1,250 each..... 2,500.00
Beall, S. W..... Clerk, class 2..... 1,400.00	1 captain of the watch..... 1,000.00	8 compositors, at \$1,250 each..... 10,000.00
Berry, William..... Clerk, class 2..... 1,400.00	1 electrician..... 1,000.00	14 printers, at \$1,200 each..... 16,800.00
Donaldson, William E..... Clerk, class 2..... 1,400.00	6 skilled artisans, at \$840 each..... 5,040.00	11 printers, at \$1,000 each..... 11,000.00
Gardiner, I. Gwynn..... Clerk, class 2..... 1,400.00	1 gardener..... 840.00	6 folders and feeders, at \$720 each..... 4,320.00
Geddings, Richard M..... Clerk, class 2..... 1,400.00	5 messengers or laborers, at \$720 each..... 3,600.00	3 folders and feeders, at \$630 each..... 1,890.00
Goucher, Henry..... Clerk, class 2..... 1,400.00	3 firemen, at \$720 each..... 2,160.00	1 chief mechanic..... 1,400.00
Holmes, Charles..... Clerk, class 2..... 1,400.00	4 watchmen, at \$720 each..... 2,880.00	5 skilled mechanics, at \$1,200 each..... 6,000.00
Johnson, Enoch G..... Clerk, class 2..... 1,400.00	5 folders and feeders, at \$720 each..... 3,600.00	7 skilled mechanics, at \$1,000 each..... 7,000.00
Kinnear, Aaron H..... Clerk, class 2..... 1,400.00	3 folders and feeders, at \$630 each..... 1,890.00	1 skilled mechanic..... 840.00
Marean, Delzene..... Clerk, class 2..... 1,400.00	6 messengers or laborers, at \$660 each..... 3,960.00	6 skilled artisans, at \$840 each..... 5,040.00
Monroe, Joseph U..... Clerk, class 2..... 1,400.00	13 messengers, messenger boys, or laborers, at \$600 each..... 7,800.00	1 engineer..... 1,200.00
Porter, W. D..... Clerk, class 2..... 1,400.00	4 messengers, messenger boys, or laborers, at \$480 each..... 1,920.00	1 fireman and steamfitter..... 840.00
Potter, S. A..... Clerk, class 2..... 1,400.00	5 messengers, messenger boys, or laborers, at \$450 each..... 2,250.00	6 firemen, at \$720 each..... 4,320.00
Smith, H. W..... Clerk, class 2..... 1,400.00	1 charwoman..... 360.00	1 captain of the watch..... 1,000.00
Tingley, Franklin G..... Clerk, class 2..... 1,400.00	3 charwomen, at \$240 each..... 720.00	1 electrician..... 1,000.00
Volker, Hermann..... Clerk, class 2..... 1,400.00		1 gardener..... 840.00
Young, Frederic A..... Clerk, class 2..... 1,400.00		2 repairmen, at \$840 each..... 1,680.00
Amer, Harry L..... Clerk, class 1..... 1,200.00		8 repairmen, at \$720 each..... 5,760.00
Ashton, Clinton J..... Clerk, class 1..... 1,200.00		4 watchmen, at \$720 each..... 2,880.00
Blgham, C. Grant..... Clerk, class 1..... 1,200.00		17 messengers, messenger boys, or laborers, at \$720 each..... 12,240.00
Chapman, Mattie H..... Clerk, class 1..... 1,200.00		6 messengers, messenger boys, or laborers, at \$660 each..... 3,960.00
Cleveland, Luman M..... Clerk, class 1..... 1,200.00		27 messengers, messenger boys, or laborers, at \$600 each..... 16,200.00
Cook, James R..... Clerk, class 1..... 900.00		87 messengers, messenger boys, or laborers, at \$480 each..... 41,760.00
Graf, Fred M..... Clerk, class 1..... 290.00		5 messengers, messenger boys, or laborers, at \$450 each..... 2,250.00
Cooper, Claude C..... Clerk, class 1..... 1,200.00		27 messenger boys, at \$360 each..... 9,720.00
Crawford, Thomas..... Clerk, class 1..... 1,200.00		1 charwoman..... 360.00
Edwards, Rowena A..... Clerk, class 1..... 1,133.33		3 charwomen, at \$240 each..... 720.00
Fry, John C..... Clerk, class 1..... 1,200.00		
Hercus, Alice T..... Clerk, class 1..... 1,200.00		
Hesse, Conrad E..... Clerk, class 1..... 1,050.00		
Rausch, Gustav E..... Clerk, class 1..... 100.00		
Hobbs, Herman E..... Clerk, class 1..... 1,123.33		
West, Edward S..... Clerk, class 1..... 76.67		
Hunter, Herbert C..... Clerk, class 1..... 1,200.00		
Mattison, E. M..... Clerk, class 1..... 1,200.00		
Melton, J. H..... Clerk, class 1..... 1,200.00		
Merrill, Herbert C..... Clerk, class 1..... 1,200.00		
Meston, R. D..... Clerk, class 1..... 1,200.00		
Minnick, S. Percy..... Clerk, class 1..... 1,200.00		
Parker, William N..... Clerk, class 1..... 1,200.00		
Pollock, Rosswitte E..... Clerk, class 1..... 1,200.00		
Rohrer, Chas. W..... Clerk, class 1..... 1,200.00		
Thompson, Arthur..... Clerk, class 1..... 1,200.00		
Welghtman, R. Hanson..... Clerk, class 1..... 1,200.00		
	Total amount of appropriation (an increase over 1910 of \$840)..... 206,150.00	Total amount estimated (an increase over 1911 of \$136,650)..... 342,800.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Office of Chief of Weather Bureau, \$205,510—Continued.	Salaries, Office of Chief of Weather Bureau, \$206,150—Continued.	Salaries, Weather Bureau, \$342,800—Continued.
Whiteside, J. L..... Clerk, class 1.....	\$1,200.00	
Williamson, Robert M..... Clerk, class 1.....	1,200.00	
Wilson, Joseph B..... Clerk, class 1.....	1,200.00	
Ackman, George, jr..... Clerk, at \$1,000.....	1,000.00	
Ball, Homer W..... Clerk, at \$1,000.....	63.89	
Wiest, Edward S..... Clerk, at \$1,000.....	936.10	
Barger, Gervase J. P..... Clerk, at \$1,000.....	1,000.00	
Buchanan, Elmer R..... Clerk, at \$1,000.....	3.34	
Rausch, Gustav E..... Clerk, at \$1,000.....	916.66	
Cade, William R..... Clerk, at \$1,000.....	241.67	
Graf, Fred. M..... Clerk, at \$1,000.....	758.33	
Connor, George W..... Clerk, at \$1,000.....	205.56	
Dugan, Henry P..... Clerk, at \$1,000.....	544.44	
Hope, James J..... Clerk, at \$1,000.....	250.00	
Covert, Roy N..... Clerk, at \$1,000.....	1,000.00	
Diehl, Geneva B..... Clerk, at \$1,000.....	1,000.00	
Emery, Frank D..... Clerk, at \$1,000.....	1,000.00	
Hamrick, Andy M..... Clerk, at \$1,000.....	1,000.00	
Hawkins, Laura F..... Clerk, at \$1,000.....	1,000.00	
Hotze, Ruby S..... Clerk, at \$1,000.....	1,000.00	
Johnson, Edward H..... Clerk, at \$1,000.....	1,000.00	
Kincer, Joseph B..... Clerk, at \$1,000.....	1,000.00	
Lazenby, Richard O..... Clerk, at \$1,000.....	1,000.00	
Miller, Robert L..... Clerk, at \$1,000.....	1,000.00	
Stone, Jesse R..... Clerk, at \$1,000.....	1,000.00	
Tracy, Anson R..... Clerk, at \$1,000.....	1,000.00	
Ball, Homer W..... Clerk, at \$900.....	842.50	
Marean, Edwin F..... Clerk, at \$900.....	57.50	
Buchanan, Elmer R..... Clerk, at \$900.....	825.00	
Paterson, George..... Clerk, at \$900.....	75.00	
Cade, William R..... Clerk, at \$900.....	682.50	
Richards, George M..... Clerk, at \$900.....	217.50	
Calvert, Samuel C..... Clerk, at \$900.....	375.00	
Kinney, Jerome F..... Clerk, at \$900.....	90.00	
Palm, John D..... Clerk, at \$900.....	124.50	
Turner, George E..... Clerk, at \$900.....	90.00	
Connor, George W..... Clerk, at \$900.....	490.00	
Hope, James J..... Clerk, at \$900.....	185.00	
Phillips, Milton W..... Clerk, at \$900.....	25.00	
Whittington, Elmer M..... Clerk, at \$900.....	92.50	
Driscoll, Michael J..... Clerk, at \$900.....	900.00	
Long, Mary..... Clerk, at \$900.....	900.00	
Lyman, Herbert..... Clerk, at \$900.....	900.00	
Weber, William..... Clerk, at \$900.....	900.00	
Keiter, William I..... Copyist, at \$840.....	203.00	
Richards, George M..... Copyist, at \$840.....	637.00	
Klock, Margaret E..... Copyist, at \$840.....	840.00	
McClelland, Harold..... Copyist, at \$840.....	63.00	
Palm, John D..... Copyist, at \$840.....	555.33	
Paterson, George..... Copyist, at \$840.....	151.67	
Thomson, Alfred R..... Copyist, at \$840.....	49.00	
Rhea, William E..... Copyist, at \$840.....	331.33	
Thomson, Alfred R..... Copyist, at \$840.....	508.67	
Peticolas, Virginia M..... Copyist, at \$720.....	720.00	
King, Thomas H..... Assistant foreman of division, at \$1,600.....	1,600.00	
Larcombe, B. F..... Assistant foreman of division, at \$1,600.....	1,600.00	
Winters, L..... Proofreader, at \$1,400.....	1,400.00	
Tuch, C. B..... Chief mechanic, at \$1,400.....	1,384.44	
Long, Samuel C..... Lithographer, at \$1,300.....	1,300.00	
Allen, George..... Lithographer, at \$1,200.....	400.00	
Thornton, Walter S..... Lithographer, at \$1,200.....	800.00	
Fraber, J. W..... Lithographer, at \$1,200.....	1,200.00	
Keough, W..... Lithographer, at \$1,200.....	1,200.00	
Ackerman, Abram A..... Pressman, at \$1,250.....	1,250.00	
Whitman, Edgar C..... Pressman, at \$1,250.....	1,250.00	
Buhrman, Oscar H..... Compositor, at \$1,250.....	1,250.00	
Burns, Charles T..... Compositor, at \$1,250.....	1,250.00	
Cooper, Robert S..... Compositor, at \$1,250.....	1,250.00	
Emmons, Lucius H..... Compositor, at \$1,250.....	1,250.00	
Estes, Samuel B..... Compositor, at \$1,250.....	357.64	
Tweeddale, Thomas H..... Compositor, at \$1,250.....	892.36	
Estes, Samuel B..... Compositor, at \$1,250.....	260.41	
von Ostermann, G. F..... Compositor, at \$1,250.....	989.58	
Farrington, W. H..... Compositor, at \$1,250.....	1,250.00	
Green, William B..... Compositor, at \$1,250.....	1,250.00	
Hutchison, James E..... Compositor, at \$1,250.....	1,250.00	
McCallum, Daniel..... Compositor, at \$1,250.....	1,243.06	
Claveloux, F. A..... Skilled mechanic, at \$1,200.....	1,200.00	
Balster, John A..... Skilled mechanic, at \$1,000.....	1,000.00	
Collins, James F..... Skilled mechanic, at \$1,000.....	1,000.00	
Francis, Fred. L..... Skilled mechanic, at \$1,000.....	1,000.00	
Martin, Julius J..... Skilled mechanic, at \$1,000.....	1,000.00	
Newham, Richard S..... Skilled mechanic, at \$1,000.....	1,000.00	
Sharp, Stewart S..... Skilled mechanic, at \$1,000.....	1,000.00	
McCartney, Bernard T..... Engineer, at \$1,200.....	990.00	
Pilcher, C. H..... Captain of watch, at \$1,000.....	150.00	
Johnson, Hiram..... Electrician, at \$1,000.....	1,000.00	
O'Neil, Daniel F..... Electrician, at \$1,000.....	1,000.00	
Allen, George..... Skilled artisan, at \$840.....	560.00	
Thornton, Walter S..... Skilled artisan, at \$840.....	280.00	
Chambers, Charles W..... Skilled artisan, at \$840.....	840.00	
Haynes, John M..... Skilled artisan, at \$840.....	840.00	
Hughes, Everett H..... Skilled artisan, at \$840.....	840.00	
Lucas, John H..... Skilled artisan, at \$840.....	840.00	
Patrick, William..... Skilled artisan, at \$840.....	840.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Chief of Weather Bureau, \$205,310—Continued.</i>	<i>Salaries, Office of Chief of Weather Bureau, \$206,150—Continued.</i>	<i>Salaries, Weather Bureau, \$342,800—Continued.</i>
Brown, Joseph..... Messenger or laborer, at \$720....	\$720.00	
Eichelberger, Thos. H.... Messenger or laborer, at \$720....	713.29	
Feigley, Joseph M..... Messenger or laborer, at \$720....	94.00	
Tracy, Frank T..... Messenger or laborer, at \$720....	626.00	
Hayes, Michael..... Messenger or laborer, at \$720....	720.00	
McLane, William, jr.... Messenger or laborer, at \$720....	720.00	
Barrett, William J..... Fireman, at \$720....	720.00	
Hudson, James M..... Fireman, at \$720....	720.00	
Morton, R. H..... Fireman, at \$720....	720.00	
Bacon, Samuel, jr..... Watchman, at \$720....	150.00	
Brown, Moses H..... Watchman, at \$720....	376.00	
Dwyer, John E..... Watchman, at \$720....	192.00	
Branham, Edward A..... Watchman, at \$720....	720.00	
Price, Evan..... Watchman, at \$720....	720.00	
Sullivan, John..... Watchman, at \$720....	720.00	
Carter, Wade H..... Folder and feeder, at \$720....	720.00	
Ford, Charles B..... Folder and feeder, at \$720....	152.00	
Watt, Frederick J..... Folder and feeder, at \$720....	562.00	
Fowler, Archibald W..... Folder and feeder, at \$720....	720.00	
Prueser, Herman C..... Folder and feeder, at \$720....	720.00	
Stone, Thad..... Folder and feeder, at \$720....	720.00	
Allen, Forest W..... Folder and feeder, at \$630....	199.50	
Keithley, John A..... Folder and feeder, at \$630....	131.25	
Russell, Joseph..... Folder and feeder, at \$630....	127.75	
Watt, Frederick J..... Folder and feeder, at \$630....	138.25	
Widman, Alfred J..... Folder and feeder, at \$630....	4.49	
Hanke, Clara D..... Folder and feeder, at \$630....	630.00	
Hoagland, Annie E..... Folder and feeder, at \$630....	630.00	
Bassinger, Henry C..... Messenger or laborer, at \$660....	190.67	
Gardiner, F. Gwynn..... Messenger or laborer, at \$660....	275.00	
Glover, George J..... Messenger or laborer, at \$660....	194.33	
Brown, Moses H..... Messenger or laborer, at \$660....	315.33	
Lee, Jesse B..... Messenger or laborer, at \$660....	344.67	
Butler, Benjamin F..... Messenger or laborer, at \$660....	660.00	
Pierce, Kenneth R..... Messenger or laborer, at \$660....	304.33	
Rhea, William E..... Messenger or laborer, at \$660....	269.50	
Tracy, Frank T..... Messenger or laborer, at \$660....	86.17	
Plummer, W..... Messenger or laborer, at \$660....	660.00	
Plummer, William, jr.... Messenger or laborer, at \$660....	660.00	
Allen, Forest W..... Messenger, messenger boy, or laborer, at \$600....	276.67	
Pierce, Kenneth R..... Messenger, messenger boy, or laborer, at \$600....	323.33	
Allen, Forest W..... Messenger, messenger boy, or laborer, at \$600....	131.67	
Barrie, Roy A..... Messenger, messenger boy, or laborer, at \$600....	441.67	
Coe, Edmund G..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Bacon, Samuel, jr..... Messenger, messenger boy, or laborer, at \$600....	475.00	
Burch, Thomas R..... Messenger, messenger boy, or laborer, at \$600....	15.00	
McCreight, John H..... Messenger, messenger boy, or laborer, at \$600....	79.17	
Smith, Louis B..... Messenger, messenger boy, or laborer, at \$600....	25.00	
Bassinger, Henry C..... Messenger, messenger boy, or laborer, at \$600....	250.00	
Gardiner, F. Gwynn..... Messenger, messenger boy, or laborer, at \$600....	350.00	
Bentley, George J..... Messenger, messenger boy, or laborer, at \$600....	176.67	
Glover, George J..... Messenger, messenger boy, or laborer, at \$600....	423.33	
Harris, Robert..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Lee, Jesse B..... Messenger, messenger boy, or laborer, at \$600....	286.67	
Stepp, John W..... Messenger, messenger boy, or laborer, at \$600....	313.33	
McDermott, Edward..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Patrick, Thomas..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Peffer, Widney J..... Messenger, messenger boy, or laborer, at \$600....	276.67	
Rhea, William E..... Messenger, messenger boy, or laborer, at \$600....	78.33	
Spann, Jack E..... Messenger, messenger boy, or laborer, at \$600....	28.33	
Welty, John F..... Messenger, messenger boy, or laborer, at \$600....	216.67	
Turner, Linwood..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Washington, Rudolph..... Messenger, messenger boy, or laborer, at \$600....	600.00	
Bair, Jefferson L..... Messenger, messenger boy, or laborer, at \$480....	173.33	
Miller, Erskine R..... Messenger, messenger boy, or laborer, at \$480....	92.00	
Welty, John F..... Messenger, messenger boy, or laborer, at \$480....	206.67	
Clafin, Walton R..... Messenger, messenger boy, or laborer, at \$480....	100.00	
Lee, Plato T..... Messenger, messenger boy, or laborer, at \$480....	100.00	
Muller, Paul H..... Messenger, messenger boy, or laborer, at \$480....	200.00	
Smith, Louis B..... Messenger, messenger boy, or laborer, at \$480....	78.67	
Gallenne, Jean H..... Messenger, messenger boy, or laborer, at \$450....	250.67	
Stepp, John W..... Messenger, messenger boy, or laborer, at \$450....	229.33	
Goepfert, Paul J..... Messenger, messenger boy, or laborer, at \$450....	244.00	
Mankin, Le Roy T..... Messenger, messenger boy, or laborer, at \$450....	89.33	
Primm, Paul H..... Messenger, messenger boy, or laborer, at \$450....	136.00	
Bair, Jefferson L..... Messenger, messenger boy, or laborer, at \$450....	60.00	
Goepfert, Paul J..... Messenger, messenger boy, or laborer, at \$450....	221.25	
Miller, Erskine R..... Messenger, messenger boy, or laborer, at \$450....	46.25	
Miller, Norman E..... Messenger, messenger boy, or laborer, at \$450....	111.25	
Braxton, Benjamin..... Messenger, messenger boy, or laborer, at \$450....	125.00	
Lee, Plato T..... Messenger, messenger boy, or laborer, at \$450....	29.75	
Primm, Paul H..... Messenger, messenger boy, or laborer, at \$450....	93.75	
Whiting, Robert A..... Messenger, messenger boy, or laborer, at \$450....	165.00	
Clafin, Walton R..... Messenger, messenger boy, or laborer, at \$450....	93.75	
Comstock, Arlington..... Messenger, messenger boy, or laborer, at \$450....	18.75	
Jones, Walter M..... Messenger, messenger boy, or laborer, at \$450....	52.81	
Muller, Paul H..... Messenger, messenger boy, or laborer, at \$450....	262.50	
Gallenne, Jean H..... Messenger, messenger boy, or laborer, at \$450....	121.25	
Hobson, Melvin C..... Messenger, messenger boy, or laborer, at \$450....	210.00	
Welty, John F..... Messenger, messenger boy, or laborer, at \$450....	93.75	
Stone, Raymond R..... Messenger, messenger boy, or laborer, at \$450....	450.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Chief of Weather Bureau, \$203,310—Continued.</i>	<i>Salaries, Office of Chief of Weather Bureau, \$206,150—Continued.</i>	<i>Salaries, Weather Bureau, \$342,800—Continued.</i>
Lomax, Amanda..... Charwoman, at \$360..... \$360.00		
Crabbs, Lydia M..... Charwoman, at \$240..... 240.00		
Holmes, Sarah E..... } Charwoman, at \$240..... { 160.00		
Templeton, Clara A..... } 80.00		
Payne, Lucy..... Charwoman, at \$240..... 240.00		
Expenditures up to Aug. 31, 1910..... 204,560.91		
Outstanding liabilities on Aug. 31, 1910..... 73.00		
Balance to be turned back into Treasury..... 676.09		
<b>Total amount of appropriation..... 205,310.00</b>		
The above force performed the following duties:	The above force are performing the following duties:	The above force will perform the following duties:
Accounts Division (charge of the accounts of the Weather Bureau, including the leasing of offices and the construction and repair of buildings, outside of Washington):	Accounts Division:	Accounts Division:
*1 assistant chief, Division of Accounts..... 2,500.00	*1 assistant chief, Division of Accounts..... \$2,500.00	*1 assistant chief, Division of Accounts..... \$2,750.00
2 clerks, at \$1,800 each..... 3,600.00	2 clerks, at \$1,800 each..... 3,600.00	2 clerks, at \$1,800 each..... 3,600.00
3 clerks, at \$1,400 each..... 4,200.00	3 clerks, at \$1,400 each..... 4,200.00	3 clerks, at \$1,400 each..... 4,200.00
5 clerks, at \$1,200 each..... 6,000.00	5 clerks, at \$1,200 each..... 6,000.00	5 clerks, at \$1,200 each..... 6,000.00
1 clerk..... 1,000.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
*1 assistant observer..... 1,000.00	*1 assistant observer..... 1,000.00	*1 assistant observer..... 1,000.00
1 copyist..... 840.00	1 clerk..... 900.00	1 clerk..... 900.00
1 messenger..... 720.00	1 messenger..... 720.00	1 messenger..... 720.00
<b>19,860.00</b>	<b>19,920.00</b>	<b>21,770.00</b>
Administration:	Administration:	Administration:
1 chief of bureau..... 6,000.00	1 chief of bureau..... 6,000.00	1 chief of bureau..... 6,000.00
1 assistant chief of bureau..... 3,000.00	1 assistant chief of bureau..... 3,000.00	1 assistant chief of bureau..... 3,000.00
1 chief clerk..... 2,250.00	1 chief clerk..... 2,250.00	1 chief clerk..... 2,750.00
4 clerks, at \$1,600 each..... 6,400.00	1 clerk..... 1,800.00	1 clerk..... 1,800.00
*1 section director..... 1,600.00	2 clerks, at \$1,600 each..... 3,200.00	3 clerks, at \$1,600 each..... 4,800.00
2 clerks, at \$1,400 each..... 2,800.00	*1 section director..... 1,600.00	2 clerks, at \$1,400 each..... 2,800.00
3 clerks, at \$1,200 each..... 3,600.00	2 clerks, at \$1,400 each..... 2,800.00	5 clerks, at \$1,200 each..... 6,000.00
4 clerks, at \$1,000 each..... 4,000.00	4 clerks, at \$1,200 each..... 4,800.00	3 clerks, at \$1,000 each..... 3,000.00
1 clerk..... 900.00	3 clerks, at \$1,000 each..... 3,000.00	1 clerk..... 900.00
3 messengers, at \$600 each..... 1,800.00	1 clerk..... 900.00	1 copyist..... 840.00
<b>32,350.00</b>	1 copyist..... 840.00	3 messengers, at \$600 each..... 1,800.00
	3 messengers, at \$600 each..... 1,800.00	<b>33,690.00</b>
<b>32,350.00</b>	<b>31,990.00</b>	
Climatological Division (supervision of the observations taken by cooperative observers located in nearly every county in the United States, the printing of the climatic data that are collected, and the collection and distribution of special observations made in the cotton, corn, wheat, and fruit sections of the United States during the crop-growing season):	Climatological Division:	Climatological Division:
*1 professor of meteorology, in charge of division..... 3,000.00	1 chief of division..... 2,000.00	1 chief of division..... 2,000.00
1 clerk..... 1,800.00	1 clerk..... 1,600.00	1 clerk..... 1,600.00
2 clerks, at \$1,400 each..... 2,800.00	1 clerk..... 1,400.00	2 clerks, at \$1,400 each..... 2,800.00
3 clerks, at \$1,200 each..... 3,600.00	6 clerks, at \$1,200 each..... 7,200.00	6 clerks, at \$1,200 each..... 7,200.00
2 clerks, at \$1,000 each..... 2,000.00	3 clerks, at \$1,000 each..... 3,000.00	3 clerks, at \$1,000 each..... 3,000.00
*1 assistant observer..... 1,000.00	*1 assistant observer..... 1,000.00	*1 assistant observer..... 1,000.00
3 clerks, at \$900 each..... 2,700.00	3 clerks, at \$900 each..... 2,700.00	3 clerks, at \$900 each..... 2,700.00
1 copyist..... 840.00	1 copyist..... 720.00	1 copyist..... 720.00
1 copyist..... 720.00	1 messenger..... 600.00	1 messenger..... 600.00
1 messenger..... 600.00		
<b>19,060.00</b>	<b>20,220.00</b>	<b>21,620.00</b>
Distributing Division (distribution of weather forecasts, storm, frost, hurricane, heavy snow, cold wave, and other warnings, and the checking and compiling of meteorological data):	NOTE.—Distributing Division abolished and the work divided among the other divisions.	NOTE.—Distributing Division abolished.
*1 chief of division..... 2,750.00		
1 clerk..... 1,600.00		
1 clerk..... 1,400.00		
4 clerks, at \$1,200 each..... 4,800.00		
2 clerks, at \$1,000 each..... 2,000.00		
1 clerk..... 900.00		
1 messenger..... 600.00		
<b>14,050.00</b>		
Forecast Division (supervision of the forecast and warning work of the entire bureau):	Forecast Division:	Forecast Division:
*1 district forecaster in charge of division..... 3,000.00	*1 district forecaster in charge of division..... 3,000.00	*1 district forecaster in charge of division..... 3,000.00
1 clerk..... 1,800.00	1 clerk..... 1,800.00	2 clerks, at \$1,800 each..... 3,600.00
1 clerk..... 1,600.00	3 clerks, at \$1,600 each..... 4,800.00	3 clerks, at \$1,600 each..... 4,800.00
2 clerks, at \$1,400 each..... 2,800.00	1 clerk..... 1,400.00	1 clerk..... 1,400.00
3 clerks, at \$1,200 each..... 3,600.00	4 clerks, at \$1,200 each..... 4,800.00	4 clerks, at \$1,200 each..... 4,800.00
2 clerks, at \$1,000 each..... 2,000.00	4 clerks, at \$1,000 each..... 4,000.00	4 clerks, at \$1,000 each..... 4,000.00
1 clerk..... 900.00	1 clerk..... 900.00	1 clerk..... 900.00
*8 assistant observers, at \$720 each..... 5,760.00	*2 assistant observers, at \$720 each..... 1,440.00	*2 assistant observers, at \$720 each..... 1,440.00
<b>21,460.00</b>	1 messenger..... 600.00	1 messenger..... 600.00
	<b>22,740.00</b>	<b>24,540.00</b>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Chief of Weather Bureau, \$205,310—Continued.</i>	<i>Salaries, Office of Chief of Weather Bureau, \$206,150—Continued.</i>	<i>Salaries, Weather Bureau, \$342,800—Continued.</i>
The above force performed the following duties—Con.	The above force are performing the following duties—Continued.	The above force will perform the following duties—Continued.
<b>Instrument Division</b> (charge of the designing, manufacture, repair, selection, and issuing of instruments and apparatus used throughout the service):	<b>Instrument Division:</b>	<b>Instrument Division:</b>
*1 professor of meteorology in charge of division.....	*1 professor of meteorology in charge of division.....	*1 professor of meteorology in charge of division.....
1 clerk.....	1 clerk.....	1 clerk.....
2 clerks, at \$1,400 each.....	2 clerks, at \$1,400 each.....	2 clerks, at \$1,400 each.....
1 chief mechanic.....	1 chief mechanic.....	1 chief mechanic.....
1 skilled mechanic.....	1 clerk.....	1 skilled mechanic.....
1 clerk.....	1 skilled mechanic.....	1 clerk.....
2 skilled mechanics, at \$1,000 each.....	2 skilled mechanics, at \$1,000 each.....	2 skilled mechanics, at \$1,000 each.....
1 messenger.....	1 messenger.....	1 messenger.....
1 messenger boy.....	1 messenger boy.....	1 messenger boy.....
14,250.00	14,450.00	14,950.00
<b>Library</b> (contains over 30,000 volumes and pamphlets pertaining to meteorological subjects. The librarian is also the supervising examiner):	<b>Library:</b>	<b>Library:</b>
1 librarian.....	1 librarian.....	1 librarian.....
1 clerk.....	1 clerk.....	1 clerk.....
1 clerk.....	1 clerk.....	1 clerk.....
4,200.00	4,400.00	4,400.00
<b>Marine Division</b> (charge of the collection and issuing of marine meteorological data, the correction of barometers for vessel captains, and the preparation and distribution of marine information):	<b>Marine Division:</b>	<b>Marine Division:</b>
1 chief of division.....	*1 marine meteorologist and chief of division.....	*1 marine meteorologist and chief of division.....
2 clerks, at \$1,400 each.....	3 clerks, at \$1,400 each.....	3 clerks, at \$1,400 each.....
2 clerks, at \$1,200 each.....	1 clerk.....	2 clerks, at \$1,200 each.....
2 clerks, at \$1,000 each.....	3 clerks, at \$1,000 each.....	3 clerks, at \$1,000 each.....
*1 assistant observer.....	*1 assistant observer.....	*1 assistant observer.....
2 clerks, at \$900 each.....	1 clerk.....	1 clerk.....
1 copyist.....	*1 assistant observer.....	1 clerk.....
*1 assistant observer.....	2 copyists, at \$840 each.....	*1 assistant observer.....
1 messenger.....	*1 assistant observer.....	2 copyists, at \$840 each.....
	1 messenger.....	*1 assistant observer.....
		1 messenger.....
14,220.00	16,700.00	17,900.00
<b>Mechanical work</b> (carpentry, electrical and miscellaneous mechanical work required about the buildings and grounds):	<b>Mechanical work:</b>	<b>Mechanical work:</b>
1 engineer.....	1 engineer.....	1 engineer.....
2 skilled mechanics, at \$1,000 each.....	2 skilled mechanics, at \$1,000 each.....	2 skilled mechanics, at \$1,200 each.....
1 electrician.....	each.....	each.....
4 skilled artisans, at \$840 each.....	1 electrician.....	3 skilled mechanics, at \$1,000 each.....
3 firemen, at \$720 each.....	4 skilled artisans, at \$840 each.....	1 electrician.....
	3 firemen, at \$720 each.....	1 fireman and steam fitter.....
		4 skilled artisans, at \$840 each.....
		3 firemen, at \$720 each.....
9,720.00	9,720.00	13,960.00
<b>Captain of the watch and messenger and labor service:</b>	<b>Captain of the watch and messenger and labor service:</b>	<b>Captain of the watch and messenger and labor service:</b>
1 clerk.....	1 clerk.....	1 clerk.....
1 captain of the watch.....	1 captain of the watch.....	1 captain of the watch.....
1 skilled artisan.....	1 skilled artisan.....	1 skilled artisan.....
*1 gardener.....	1 gardener.....	1 gardener.....
2 laborers, at \$720 each.....	*1 assistant observer.....	*1 assistant observer.....
4 watchmen, at \$720 each.....	2 laborers, at \$720 each.....	2 laborers, at \$720 each.....
2 laborers, at \$660 each.....	4 watchmen, at \$720 each.....	4 watchmen, at \$720 each.....
1 messenger.....	2 laborers, at \$660 each.....	2 laborers, at \$660 each.....
1 messenger.....	1 messenger.....	1 messenger.....
3 laborers, at \$600 each.....	1 messenger.....	1 messenger.....
2 laborers, at \$480 each.....	3 laborers, at \$600 each.....	3 laborers, at \$600 each.....
2 messenger boys, at \$480 each.....	2 laborers, at \$480 each.....	2 laborers, at \$480 each.....
1 laborer.....	2 messenger boys, at \$480 each.....	2 messenger boys, at \$480 each.....
2 messenger boys, at \$450 each.....	1 laborer.....	1 laborer.....
1 charwoman.....	2 messenger boys, at \$450 each.....	2 messenger boys, at \$450 each.....
3 charwomen, at \$240 each.....	1 charwoman.....	1 charwoman.....
	3 charwomen, at \$240 each.....	3 charwomen, at \$240 each.....
16,930.00	17,650.00	17,650.00
<b>Publications Division</b> (charge of the printing of weather maps, bulletins, forms, Monthly Weather Review, and other publications):	<b>Publications Division:</b>	<b>Publications Division:</b>
1 chief of division.....	1 chief of division.....	1 chief of division.....
2 assistant foremen of division, at \$1,600 each.....	2 assistant foremen of division, at \$1,600 each.....	2 assistant foremen of division, at \$1,600 each.....
1 proof reader.....	1 proof reader.....	4 monotype operators and compositors, at \$1,500 each.....
1 lithographer.....	1 lithographer.....	1 monotype machinist.....
13 compositors, at \$1,250 each.....	13 compositors, at \$1,250 each.....	1 lithographer.....
2 pressmen, at \$1,250 each.....	2 pressmen, at \$1,250 each.....	1 proof reader.....
3 lithographers, at \$1,200 each.....	3 lithographers, at \$1,200 each.....	8 monotype operators and compositors, at \$1,250 each.....
1 clerk.....	1 clerk.....	
1 clerk.....	1 clerk.....	
1 skilled mechanic.....	1 clerk.....	
2,000.00	2,000.00	2,000.00
3,200.00	3,200.00	3,200.00
1,400.00	1,400.00	6,000.00
1,300.00	1,300.00	1,500.00
16,250.00	16,250.00	1,500.00
2,500.00	2,500.00	1,400.00
3,600.00	3,600.00	
1,200.00	1,200.00	
1,000.00	1,000.00	
1,000.00	1,000.00	



Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Chief of Weather Bureau, \$205,510—Continued.</i>	<i>Salaries, Office of Chief of Weather Bureau, \$206,150—Continued.</i>	<i>Salaries, Weather Bureau, \$342,800—Continued.</i>
The above force performed the following duties—Con.	The above force are performing the following duties—Continued.	The above force will perform the following duties—Continued.
*Paid from "General expenses, Weather Bureau"..... \$26,670.00	*Paid from "General expenses, Weather Bureau"..... \$20,320.00	*Paid from "General expenses, Weather Bureau"..... \$19,220.00
†3 employees paid from "General expenses, Weather Bureau"..... 3,750.00	†3 compositors, at \$1,250 each; 1 folder and feeder, at \$720; and 1 folder and feeder, at \$630, paid from "General expenses, Weather Bureau"..... 5,100.00	**Paid from "Salaries, Division of Accounts and Disbursements"..... 2,750.00
†1 employee paid from "General expenses, Weather Bureau"..... 720.00	**Paid from "Salaries, Division of Accounts and Disbursements"..... 2,500.00	
**Paid from "Salaries, Division of Accounts and Disbursements"..... 2,500.00		
33,640.00	27,920.00	21,970.00
<i>Contingent expenses, Weather Bureau, \$25,000.</i>	<i>Contingent expenses, Weather Bureau, \$25,000.</i>	<i>Contingent expenses, Weather Bureau, \$25,000.</i>
Fuel..... \$2,319.10	Fuel..... \$3,000.00	Fuel..... \$3,000.00
Gas..... 463.32	Gas..... 470.00	Gas..... 470.00
Hauling ashes, rubbish, etc..... 123.43	Hauling ashes, rubbish, etc..... 150.00	Hauling ashes, rubbish, etc..... 150.00
Rent of fire-alarm boxes..... 50.00	Rent of fire-alarm boxes..... 50.00	Rent of fire-alarm boxes..... 50.00
Repairs to buildings and care of grounds..... 4,866.24	Repairs to buildings and care of grounds..... 5,536.00	Repairs to buildings and care of grounds..... 6,000.00
Engine generator and repairs to heating plant..... 3,999.52	Extending and improving heating system..... 2,659.00	Stationery, blank books, etc..... 3,000.00
Stationery, blank books, etc..... 1,185.64	Stationery, blank books, etc..... 2,000.00	Miscellaneous supplies..... 7,650.00
Miscellaneous supplies..... 7,797.87	Miscellaneous supplies..... 6,500.00	Furniture, carpets, etc..... 2,000.00
Furniture, carpets, etc..... 1,440.00	Furniture, carpets, etc..... 2,000.00	Rent of telephones, etc..... 670.00
Rent of telephones, etc..... 611.94	Rent of telephones, etc..... 625.00	Freight and express..... 200.00
Freight and express..... 181.18	Freight and express..... 200.00	Apparatus, instruments, laboratory material, etc..... 310.00
Apparatus, instruments, laboratory material, etc..... 39.50	Apparatus, instruments, laboratory material, etc..... 310.00	Forage..... 425.00
Forage..... 410.16	Forage..... 425.00	Purchase of and repairs to wagons, harness, etc..... 600.00
Purchase of horse..... 205.00	Purchase of and repairs to wagons, harness, etc..... 600.00	Ice..... 375.00
Purchase of and repairs to wagons, harness, etc..... 394.75	Ice..... 375.00	Washing towels..... 100.00
Ice..... 358.64	Washing towels..... 100.00	
Washing towels..... 97.01		
Total expenditures to Aug. 31, 1910..... 24,543.30	Total amount of appropriation (no increase over 1910)..... 25,000.00	Total amount estimated (no increase over 1911)..... 25,000.00
Outstanding liabilities on Aug. 31, 1910..... 268.00		
Balance to be turned back into Treasury..... 188.70		
Total amount of appropriation..... 25,000.00		
<i>General expenses, Weather Bureau, \$1,277,960.</i>	<i>General expenses, Weather Bureau, \$1,293,610.</i>	<i>General expenses, Weather Bureau, \$1,283,510.</i>
In Washington:	In Washington:	In Washington:
4 professors of meteorology, at \$3,000 each..... \$11,608.33	1 professor of meteorology..... \$3,500.00	2 professors of meteorology, at \$3,500 each..... \$7,000.00
1 professor of meteorology and district forecaster, at \$2,400 and \$3,000..... 2,576.66	1 professor of meteorology..... 3,000.00	1 district forecaster..... 3,000.00
1 chief, Distributing Division, at \$2,750..... 2,742.36	1 district forecaster..... 3,000.00	1 marine meteorologist and chief of division..... 2,500.00
1 section director, at \$1,800..... 1,050.00	1 marine meteorologist and chief of division..... 2,500.00	3 assistant observers, at \$1,000 each..... 3,000.00
1 section director, at \$1,600..... 102.22	1 section director..... 1,600.00	1 assistant observer..... 840.00
1 compositor, at \$1,500..... 164.31	3 compositors, at \$1,250 each..... 3,750.00	4 assistant observers, at \$720 each..... 2,880.00
7 compositors, at \$1,250 each..... 1,788.23	3 assistant observers, at \$1,000 each..... 3,000.00	
1 compositor and monotype machinist, at \$1,250..... 496.53	1 assistant observer..... 840.00	
1 printer, at \$1,200..... 50.00	4 assistant observers, at \$720 each..... 2,880.00	
3 assistant observers, at \$1,000 each..... 2,483.33	1 folder and feeder..... 720.00	
4 assistant observers, at \$840 each..... 632.33	1 folder and feeder..... 630.00	
1 assistant observer, at \$720..... 150.00		
1 gardener, at \$720 and \$840..... 820.00		
1 folder and feeder, at \$630 and \$720..... 386.25		
2 folders and feeders, at \$630 each..... 223.89		
25,274.44	25,420.00	19,220.00
Out of Washington:	Out of Washington:	Out of Washington:
1 professor of meteorological physics..... 3,000.00	1 professor of meteorology..... 3,500.00	3 professors of meteorology, at \$3,500 each..... 10,500.00
3 professors of meteorology, at \$3,000 each..... 9,000.00	2 professors of meteorology, at \$3,000 each..... 6,000.00	1 professor of meteorological physics..... 3,500.00
2 professors of meteorology, at \$2,500 each..... 5,000.00	1 professor of meteorological physics..... 3,000.00	2 professors of meteorology, at \$2,500 each..... 5,000.00
2 inspectors, at \$2,500 each..... 5,000.00	2 professors of meteorology, at \$2,500 each..... 5,000.00	7 district forecasters, at \$2,400 each..... 16,800.00
9 district forecasters, at \$2,400 each..... 20,866.67	2 inspectors, at \$2,500 each..... 5,000.00	6 local forecasters, at \$2,000 each..... 12,000.00
1 research director..... 2,000.00	7 district forecasters, at \$2,400 each..... 16,800.00	1 research director..... 2,000.00
1 research observer..... 1,400.00	5 local forecasters, at \$2,000 each..... 10,000.00	8 section directors, at \$2,000 each..... 16,000.00
3 local forecasters, at \$2,000 each..... 6,000.00	1 research director..... 2,000.00	9 local forecasters, at \$1,800 each..... 16,200.00
9 local forecasters, at \$1,800 each..... 15,100.54	7 section directors, at \$2,000 each..... 14,000.00	13 section directors, at \$1,800 each..... 23,400.00
17 local forecasters, at \$1,600 each..... 26,098.86	8 local forecasters, at \$1,800 each..... 14,400.00	18 local forecasters, at \$1,600 each..... 28,800.00
35 local forecasters, at \$1,400 each..... 47,142.24	12 section directors, at \$1,800 each..... 21,600.00	9 section directors, at \$1,600 each..... 14,400.00
7 section directors, at \$2,000 each..... 13,083.33	17 local forecasters, at \$1,600 each..... 27,200.00	35 local forecasters, at \$1,400 each..... 49,000.00
15 section directors, at \$1,800 each..... 23,909.44	8 section directors, at \$1,600 each..... 12,800.00	11 section directors, at \$1,400 each..... 15,400.00
9 section directors, at \$1,600 each..... 13,492.22	34 local forecasters, at \$1,400 each..... 47,600.00	6 local forecasters, at \$1,200 each..... 7,200.00
12 section directors, at \$1,400 each..... 16,700.01	10 section directors, at \$1,400 each..... 14,000.00	
1 section director..... 1,000.00		
102 observers, at \$1,200 each..... 113,799.95		
96 assistant observers, at \$1,000 each..... 86,734.13		
72 assistant observers, at \$840 each..... 55,915.65		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Weather Bureau, \$1,277,950—Continued.</i>	<i>General expenses, Weather Bureau, \$1,293,610—Continued.</i>	<i>General expenses, Weather Bureau, \$1,283,310—Continued.</i>
Out of Washington—Continued.	Out of Washington—Continued.	Out of Washington—Continued.
59 assistant observers, at \$720 each..... \$19,160.67	6 local forecasters, at \$1,200 each..... \$7,200.00	1 research observer..... \$1,400.00
1 operator..... 1,200.00	1 research observer..... 1,400.00	88 observers, at \$1,200 each... 105,600.00
1 expert in vessel reporting..... 840.00	90 observers, at \$1,200 each... 108,000.00	2 local forecasters, at \$1,000 each..... 2,000.00
15 printers, at \$1,200 each..... 16,400.00	1 operator..... 1,200.00	1 section director..... 1,000.00
19 printers, at \$1,000 each..... 15,211.10	14 printers, at \$1,200 each..... 16,800.00	89 assistant observers, at \$1,000 each..... 89,000.00
1 skilled mechanic, at \$1,200..... 1,196.67	2 local forecasters, at \$1,000 each..... 2,000.00	108 assistant observers, at \$840 each..... 90,720.00
1 skilled mechanic, at \$1,000..... 875.01	1 section director..... 1,000.00	1 expert in vessel reporting... 840.00
2 repair men, at \$840 each..... 1,680.00	88 assistant observers, at \$1,000 each..... 88,000.00	2 station agents, at \$300 each... 600.00
10 repair men, at \$720 each..... 5,020.00	11 printers, at \$1,000 each..... 11,000.00	7 student assistants, at \$300 each..... 2,100.00
1 carpenter, at \$720..... 720.00	1 local forecaster..... 900.00	For temporary and emergency assistance..... 6,000.00
1 unskilled laborer, at \$720..... 720.00	68 assistant observers, at \$840 each..... 57,120.00	
1 unskilled laborer, at \$240..... 128.67	39 assistant observers, at \$720 each..... 28,080.00	
1 unclassified laborer, at \$600..... 600.00	1 skilled mechanic..... 1,200.00	
1 unclassified laborer, at \$480..... 87.34	1 expert in vessel reporting... 840.00	
2 firemen, at \$720 each..... 1,440.00	2 repairmen, at \$840 each..... 1,680.00	
3 station agents, at \$300 each..... 675.00	6 repair men, at \$720 each..... 4,320.00	
10 student assistants, at \$300 each..... 2,368.33	2 firemen, at \$720 each..... 1,440.00	
10 messengers, at \$720 each..... 6,355.33	1 carpenter..... 720.00	
13 messengers, at \$600 each..... 6,935.00	1 unskilled laborer..... 720.00	
90 messengers, at \$480 each..... 35,226.61	1 unclassified laborer..... 600.00	
52 messengers, at \$360 each..... 6,563.50	2 unclassified laborers, at \$480 each..... 960.00	
1 evaporation observer, at \$5 per day..... 1,455.00	2 station agents, at \$300 each... 600.00	
2 evaporation observers, at \$3 per day..... 1,551.00	6 student assistants, at \$300 each..... 1,800.00	
2 evaporation observers, at \$2 per day..... 1,018.00	9 messengers, at \$720 each..... 6,480.00	
For temporary assistance..... 2,648.81	14 messengers, at \$600 each... 8,400.00	
	68 messenger boys, at \$480 each..... 32,640.00	
	29 messenger boys, at \$360 each..... 10,440.00	
	1 evaporation observer..... 222.00	
	1 evaporation observer..... 72.00	
	For temporary assistance..... 1,356.00	
	600,090.00	520,360.00
The employees on duty in Washington who were paid from the above-named appropriation were assigned to the various divisions and sections as in the foregoing pages.	The employees on duty in Washington who are being paid from the above-named appropriation are assigned to the various divisions and sections as in the foregoing pages.	The employees on duty in Washington who are to be paid from the above-named appropriation will be assigned to the various divisions and sections as in the foregoing pages.
The employees outside of Washington who were paid from the same appropriation were assigned to the 209 stations located throughout the United States, the West Indies, and the Hawaiian Islands.	The employees outside of Washington who are being paid from the same appropriation are assigned to the 215 stations located throughout the United States, the West Indies, and the Hawaiian Islands.	The employees outside of Washington who are to be paid from the same appropriation will be assigned to the 215 stations located throughout the United States, the West Indies, and the Hawaiian Islands.
Stationery..... 15,268.43	Stationery..... 20,000.00	Stationery..... 20,000.00
Miscellaneous supplies, services, etc..... 54,291.29	Miscellaneous supplies, services, etc..... 58,387.80	Miscellaneous supplies, services, etc..... 60,500.00
Furniture..... 8,594.54	Furniture..... 12,000.00	Furniture..... 12,000.00
Fuel..... 7,198.27	Fuel..... 8,067.10	Fuel..... 8,000.00
Freight..... 2,939.75	Freight..... 7,000.00	Freight..... 7,000.00
Express..... 692.66	Express..... 2,000.00	Express..... 2,000.00
Telegraphing, telephoning, and cabling circuit reports..... 76,146.44	Telegraphing, telephoning, and cabling circuit reports..... 98,253.25	Telegraphing, telephoning, and cabling circuit reports..... 110,000.00
Forecasts, warnings, observations, etc..... 104,289.01	Forecasts, warnings, observations, etc..... 155,000.00	Forecasts, warnings, observations, etc..... 192,700.00
Rent of telephones..... 23,226.20	Rent of telephones..... 12,446.75	Rent of telephones..... 13,000.00
Rent of offices..... 73,953.43	Rent of offices..... 75,087.80	Rent of offices..... 85,000.00
Gas and electricity..... 5,365.30	Gas and electricity..... 4,120.60	Gas and electricity..... 4,500.00
Traveling and station and field expenses..... 26,214.53	Traveling and station and field expenses..... 22,000.00	Traveling and station and field expenses..... 22,000.00
Instruments, apparatus, etc..... 9,791.41	Instruments, apparatus, etc..... 30,000.00	Instruments, apparatus, etc..... 35,000.00
Maintenance and repair of telegraph lines..... 2,978.78	Maintenance and repair of telegraph lines..... 4,000.00	Maintenance and repair of telegraph lines..... 4,000.00
Repairs to buildings..... 8,641.43	Repairs to buildings..... 7,412.20	Repairs to buildings..... 12,500.00
Printing office (in Washington)..... 41,788.21	For rebuilding and equipping the Weather Bureau building at Sand Key, Fla..... 15,000.00	Printing office (in Washington)..... 35,530.00
Printing and binding..... 1,671.99	Printing office (in Washington)..... 34,900.00	Printing and binding..... 2,000.00
Climatological and aerial investigations..... 10,238.58	Printing and binding..... 2,000.00	Climatological and aerial investigations..... 18,000.00
Evaporation investigations..... 2,220.07	Climatological and aerial investigations..... 10,000.00	Evaporation investigations..... 2,000.00
Pay for river and rainfall observations..... 28,634.72	Evaporation investigations..... 2,000.00	Pay for river and rainfall observations..... 45,000.00
Pay for snow and ice observations..... 32.00	Pay for river and rainfall observations..... 46,934.00	Pay for snow and ice observations..... 250.00
Pay for climatological and crop observations..... 38,538.22	Pay for snow and ice observations..... 36.00	Pay for climatological and crop observations..... 32,500.00
Pay for storm and hurricane display men..... 17,964.00	Pay for climatological and crop observations..... 22,060.20	Pay for storm and hurricane display men..... 20,000.00
Pay for cranberry observations..... 160.00		Pay for cranberry observations... 250.00
560,844.26		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Weather Bureau, \$1,277,950—Continued.</i>	<i>General expenses, Weather Bureau, \$1,293,610—Continued.</i>	<i>General expenses, Weather Bureau, \$1,283,310—Continued.</i>
Expenditures to Aug. 31, 1910.....\$1,180,999.78	Pay for storm and hurricane dis- playmen.....\$19,144.30	
Less repayment to credit of appropriation.....17.47	Pay for cranberry observations...250.00	
Net expenditures to Aug. 31, 1910.....1,180,982.31		
Outstanding liabilities on Aug. 31, 1910 (estimated).....86,244.00		
Balance to be turned back into Treasury (estimated).....10,723.69		
Total of appropriation.....1,277,950.00	Total of appropriation (an increase over 1910 of \$15,660).....1,293,610.00	Total amount estimated (a decrease from 1911 of \$10,300).....\$1,283,310.00
NOTE.—The above expenditures, classified in ac- cordance with the suggestion of the Congressional Com- mittee on Expenditures for this department, were necessary in prosecuting the important work of the Weather Bureau. This work fell naturally under the following projects:	NOTE.—The above expendi- tures, classified in accordance with the suggestion of the Con- gressional Committee on Ex- penditures for this depart- ment, are being incurred in prosecuting the important work of the Weather Bureau. This work falls naturally un- der the following projects:	NOTE.—The above expendi- tures, classified in accordance with the suggestion of the Congressional Committee on Expenditures for this de- partment, have been submit- ted as necessary for prosecut- ing the important work of the Weather Bureau. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
The general work of the Weather Bureau outside of Washington was carried on under the authority con- tained in two appropriations, viz, "Salaries, Weather Bureau," from which all commissioned and tempo- rary employees were paid, and "General expenses, Weather Bureau," from which all other expenses were paid. The commissioned employees were located at 209 stations, the majority of which served as centers for the prosecution of forecast, climatological, crop, river and flood work, etc., in the surrounding sections. The official in charge and the employees under him were engaged in the performance of the various lines of work that were carried on at each station. This work has been divided into projects, which are hereafter de- scribed. As an illustration: The official in charge of the station at New Orleans is in charge of the climato- logical work of the State of Louisiana, the forecasting of stages for the rivers within the State, the taking and recording of observations, the issuing of daily weather and temperature forecasts, the making of frost and cold- wave forecasts for several States, the dissemination of storm and hurricane warnings, the collection and dis- semination of special meteorological crop observations, ocean meteorological observations, the printing and iss- uing of weather maps, bulletins, forecast cards, etc. All of this work is done by the official in charge and his corps of assistants, much of it being done simultaneously, the total time devoted to any one project varying from day to day according to existing weather conditions. The whole work is done in the same office, using the same furniture, stationery, and having a common ex- pense for fuel, gas, electricity, etc. The work is so co- ordinated as to accomplish the greatest amount with the least expense, but the impracticability of deter- mining an accurate cost of rent, gas, electricity, fuel, stationery, furniture, and other miscellaneous ex- penses and the exact salary cost for each line of work is evident. The condition at New Orleans is typical of other stations. Therefore the cost indicated for each project has been approximated, but it is reasonably correct.	(1) Administration (in Washing- ton), Willis L. Moore, Chief of Bureau: Salaries in Washington.....119,890.00 Traveling and field expenses..800.00 Fuel, lights, repairs, supplies, etc.....25,000.00 145,690.00	(1) Administration (in Washing- ton), Willis L. Moore, Chief of Bureau: Salaries in Washington.....124,190.00 Traveling and field expenses.800.00 Fuel, lights, repairs, sup- plies, etc.....25,000.00 149,990.00
(1) Administration (in Washington), Willis L. Moore, Chief of Bureau: Salaries in Washington.....115,813.12 Traveling and field expenses.....752.59 Fuel, lights, repairs, supplies, etc.....24,811.30 141,377.01	(2) The Monthly Weather Review, Preston C. Day, chief of division (Washington), editor: Salaries.....10,000.00 Paper, etc.....2,500.00 12,500.00	(2) The Monthly Weather Re- view, Preston C. Day, chief of division (Washington), editor: Salaries.....10,000.00 Paper, etc.....2,500.00 12,500.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Weather Bureau, \$1,277,950—Continued.</i>	<i>General expenses, Weather Bureau, \$1,293,610—Continued.</i>	<i>General expenses, Weather Bureau, \$1,283,310—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(3) Forecast work, Edward B. Garriott, professor of meteorology (Washington), in charge:	(3) Forecast work, Edward H. Bowie, district forecaster (Washington), in charge:	(3) Forecast work, Edward H. Bowie, district forecaster (Washington), in charge:
(a) Weather and temperature forecasts: Made twice daily for all States; based upon observations of meteorological conditions made at about 230 stations in the United States, the West Indies, Hawaiian Islands, Alaska, the Azores, Iceland, Canada, and a few points in Europe and Asia.		
(b) Storm warnings: Warnings of storms likely to imperil shipping; distributed by telegraph, telephone, and other expeditious means to all ports on the Atlantic, Pacific, and Gulf seacoasts and Great Lakes that are within the threatened zone.		
(c) Cold waves: Advices of coming cold waves given in threatened districts 12 to 36 hours in advance by means of telegraph, telephone, mail, flag signals, etc.		
(d) Frost warnings: Issued during crop-growing seasons in the interest of fruit, truck, tobacco, and other growers.		
(e) Hurricane warnings: Special advices to threatened districts on Atlantic and Gulf coasts of approach of West Indian hurricanes.		
(f) Heavy-snow warnings: For the benefit of transportation lines both in and out of cities.		
(g) The daily distribution of forecasts and meteorological information by maps, bulletins, forecast cards, etc.		
Salaries..... \$378,784.20	Salaries..... \$381,550.00	Salaries..... \$415,565.00
Traveling and field expenses..... 11,988.33	Traveling and field expenses..... 10,560.00	Traveling and field expenses..... 10,560.00
Miscellaneous supplies and expenses..... 304,839.54	Miscellaneous supplies and expenses..... 312,560.00	Miscellaneous supplies and expenses..... 358,000.00
695,612.07	704,670.00	784,125.00
(4) River and flood service, Harry C. Frankenfield, professor of meteorology (Washington), in charge:	(4) River and flood service, Harry C. Frankenfield, professor of meteorology (Washington), in charge:	(4) River and flood service, Harry C. Frankenfield, professor of meteorology (Washington), in charge:
For the staging of rivers and the issuing of daily forecasts of water stages and of flood warnings, in the interest of commerce and navigation, and for the saving of life and property.		
Salaries..... 73,738.44	Salaries..... 78,045.00	Salaries..... 80,730.00
Traveling and field expenses..... 1,020.18	Traveling and field expenses..... 880.00	Traveling and field expenses..... 880.00
Miscellaneous supplies and expenses..... 25,887.54	Miscellaneous supplies and expenses..... 46,884.00	Miscellaneous supplies and expenses..... 53,700.00
100,646.16	125,809.00	135,310.00
(5) Cranberry-marsh investigations, Henry J. Cox, professor of meteorology (Chicago), in charge:	(5) Cranberry-marsh investigations, Henry J. Cox, professor of meteorology (Chicago), in charge:	(5) Cranberry-marsh investigations, Henry J. Cox, professor of meteorology (Chicago), in charge:
Conducted in the marshes of Wisconsin for the purpose of improving frost warnings for the benefit of this industry, which is peculiarly subject to damage by frost.		
Salaries..... 160.00	Salaries..... 250.00	Salaries..... 250.00
Miscellaneous supplies and expenses..... 50.00	Miscellaneous supplies and expenses..... 50.00	Miscellaneous supplies and expenses..... 50.00
210.00	300.00	300.00
(6) Climatological and crop work, Frank H. Bigelow, professor of meteorology (Washington), in charge:	(6) Climatological and crop work, Preston C. Day, chief of division (Washington), in charge:	(6) Climatological and crop work, Preston C. Day, chief of division (Washington), in charge:
(a) Climatological work: Establishing the climatology of the United States by means of meteorological observations taken at regular stations and by about 3,600 cooperative observers, at least one being located in each county in the United States. The data for each State is collected monthly at a regular station designated as the State center and published in the Monthly Weather Review.		
(b) Meteorological crop reports: Special observations of weather, precipitation, and temperature taken at about 290 places in the great cereal and cotton belts and telegraphed daily to district centers, where they are issued in bulletin form for the benefit of the corn, cotton, sugar, rice, and wheat interests. Weekly bulletins, giving the summary of weather conditions for the preceding week that have had marked bearing on crops, are printed and issued from each State center.		
Salaries..... 109,419.15	Salaries..... 120,406.00	Salaries..... 129,860.00
Traveling and field expenses..... 3,060.54	Traveling and field expenses..... 2,640.00	Traveling and field expenses..... 2,640.00
Miscellaneous supplies and expenses..... 77,662.61	Miscellaneous supplies and expenses..... 78,140.00	Miscellaneous supplies and expenses..... 89,500.00
190,142.30	201,186.00	222,000.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Weather Bureau, \$1,277,950—Continued.</i>	<i>General expenses, Weather Bureau, \$1,293,610—Continued.</i>	<i>General expenses, Weather Bureau, \$1,283,310—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(7) Marine meteorology, Henry L. Heiskell, chief of division (Washington), in charge:	(7) Marine meteorology, Henry L. Heiskell, marine meteorologist and chief of division (Washington), in charge:	(7) Marine meteorology, Henry L. Heiskell, marine meteorologist and chief of division (Washington), in charge:
(a) Marine meteorological work: The collection of meteorological and physical information pertaining to the oceans, for vessels of war, of commerce, etc.; plotting the data on daily synoptic charts, etc.; and the preparation of data for use in the monthly pilot charts of the Atlantic and Pacific Oceans, issued by the Hydrographic Office.		
(b) Vessel reporting: The arrival and departure of passing vessels for the benefit of commerce and navigation at certain stations located on the Atlantic, Gulf, and Pacific coasts.		
Salaries.....	Salaries.....	Salaries.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....
34,294.46	26,840.00	28,040.00
(8) Research observatory, Alfred J. Henry, professor of meteorology (Mount Weather, Va.), in charge:	(8) Research observatory, Alfred J. Henry, professor of meteorology (Mount Weather, Va.), in charge:	(8) Research observatory, Alfred J. Henry, professor of meteorology (Mount Weather, Va.), in charge:
For conducting meteorological observations for the improvement of weather forecasts, warnings, etc.		
(a) Meteorological observation station work.		
(b) Studies of the atmosphere at the surface of the earth and at various altitudes, determinations of its temperature, moisture content, pressure, state of electrification, direction, and magnitude of its movements, its cloudiness, dust content, absorption of light, of heat, and of electric waves, and its various other properties.		
(c) Solar investigations, involving a careful measurement of the insolation or amount of solar energy reaching the earth in a unit of time, the size and distribution of sun spots, faculae, and prominences, and an especial effort to detect all changes in the registered amounts of the solar energy and a careful effort to refer these changes to their real causes, whether of terrestrial or of solar origin.		
(d) Terrestrial magnetism: A study of the regular and of the irregular changes in the magnitude and direction of the earth's magnetic force in connection with other terrestrial phenomena and with solar activities of all kinds.		
(e) Laboratory investigations: The reproduction under controllable conditions of various meteorological phenomena and experiments that may aid in explaining the origin and laws of weather conditions; also the construction and standardizing of certain apparatus.		
Salaries.....	Salaries.....	Salaries.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
Miscellaneous supplies, apparatus, etc.....	Miscellaneous supplies, apparatus, etc.....	Miscellaneous supplies, apparatus, etc.....
37,961.40	38,000.00	38,000.00
(9) Instruments, Charles F. Marvin, professor of meteorology (Washington), in charge:	(9) Instruments, Charles F. Marvin, professor of meteorology (Washington), in charge:	(9) Instruments, Charles F. Marvin, professor of meteorology (Washington), in charge:
Testing, comparing, devising, and making the delicate and dependable instruments that are required in practical and scientific meteorological work.		
Salaries.....	Salaries.....	Salaries.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....
66,142.34	67,051.00	73,530.00
(10) Inspection of stations, Norman B. Conger, inspector (Detroit, Mich.); Henry B. Hersey, inspector (Milwaukee, Wis.), two officials who are charged with the inspection of the personnel, records, and service at the 209 regular stations of the bureau:	(10) Inspection of stations, Norman B. Conger, inspector (Detroit, Mich.); Henry B. Hersey, inspector (Milwaukee, Wis.):	(10) Inspection of stations, Norman B. Conger, inspector (Detroit, Mich.); Henry B. Hersey, inspector (Milwaukee, Wis.):
Salaries.....	Salaries.....	Salaries.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
5,860.39	6,000.00	6,000.00
(11) Telegraph service, Jesse H. Robinson, chief of division (Washington), in charge:	(11) Telegraph service, Jesse H. Robinson, chief of division (Washington), in charge:	(11) Telegraph service, Jesse H. Robinson, chief of division (Washington), in charge:
The collection and dissemination of observations, reports, forecasts, warnings, etc., including the maintenance and repair of telegraph and cable lines. The Weather Bureau operates several Government telegraph and cable lines, which are maintained for the securing of meteorological observations and in the interest of navigation, including the reporting of wrecks and marine casualties.		
Salaries.....	Salaries.....	Salaries.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....	Miscellaneous supplies and expenses.....
46,285.40	47,613.00	51,493.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Weather Bureau—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Weather Bureau, \$1,277,950—Continued.</i>	<i>General expenses, Weather Bureau, \$1,293,610—Continued.</i>	<i>General expenses, Weather Bureau, 1,293,310—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(12) Records, James Berry, chief of division (Washington), in charge: Taking observations, correcting, and compiling the meteorological records made by the bureau at all regular and cooperative stations. Salaries..... \$78,463.07 Traveling and field expenses..... 2,448.44 Miscellaneous supplies and expenses..... 62,130.08  143,041.59	(12) Records, Preston C. Day, chief of division (Washington), in charge: Salaries..... \$75,723.00 Traveling and field expenses..... 2,112.00 Miscellaneous supplies and expenses..... 41,674.00  119,509.00	(12) Records, Preston C. Day, chief of division (Washington), in charge: Salaries..... \$82,170.00 Traveling and field expenses..... 2,112.00 Miscellaneous supplies and expenses..... 47,740.00  132,022.00
(13) Buildings, Edgar B. Calvert, assistant chief, Division of Accounts (Washington), in charge: The construction and repair of observatory buildings outside of the District of Columbia. Salaries..... 500.00 Traveling and field expenses..... 453.94 Miscellaneous supplies and expenses for repairs..... 8,937.82  9,891.76	(13) Buildings, Edgar B. Calvert, assistant chief, Division of Accounts (Washington), in charge: Salaries..... 500.00 Traveling and field expenses..... 200.00 Miscellaneous supplies and expenses for repairs..... 9,000.00 For construction of building at Sand Key, Fla..... 15,000.00  24,700.00	(13) Buildings, Edgar B. Calvert, assistant chief, Division of Accounts (Washington), in charge: Salaries..... 500.00 Traveling and field expenses..... 200.00 Miscellaneous supplies and expenses for repairs..... 12,500.00  13,200.00
(14) Evaporation, Frank H. Bigelow, professor of meteorology (Washington), in charge: The overflow of the Colorado River through the irrigation ditches in the Imperial Valley filled the old Salton Basin, 285 feet below sea level, to the depth of 80 feet. The Salton Sea now presents a surface of several hundred square miles and affords an exceptional opportunity for evaporation investigations. These investigations are to determine the rate at which valuable subjugated lands will be recovered, and solve many problems that are of vital importance to engineers engaged in irrigation, waterways, and reclamation work. Evaporation and rainfall are correlative factors in the supplying of water for reservoirs, waterways, and farming generally, but meteorologists have heretofore been limited to the collection of precipitation data only, and there is a lack of knowledge regarding the losses by evaporation. It is a gap in practical science greatly needing to be filled. Salaries..... \$,234.00 Traveling and field expenses..... 1,812.57 Miscellaneous supplies and expenses..... 2,220.07  12,316.64	(14) Evaporation, Harry C. Frankenfeld, professor of meteorology (Washington), in charge: Salaries..... 2,692.00 Traveling and field expenses..... 200.00 Miscellaneous supplies and expenses..... 2,000.00  4,892.00	(14) Evaporation, Harry C. Frankenfeld, professor of meteorology (Washington), in charge: Salaries..... 2,400.00 Traveling..... 200.00 Miscellaneous supplies and expenses..... 2,000.00  4,600.00
Total appropriation for Weather Bureau..... 1,508,260.00	Total appropriation for Weather Bureau (an increase over 1910 of \$16,500)..... 1,524,760.00	Total amount estimated for Weather Bureau (an increase over 1911 of \$126,350)..... 1,651,110.00
Total net expenditures to Aug. 31, 1910..... 1,410,086.52		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 86,585.00		
Balance to be turned back into Treasury (estimated)..... 11,588.48		

## BUREAU OF ANIMAL INDUSTRY.

Salaries, Bureau of Animal Industry, 1910, \$114,100.	Salaries, Bureau of Animal Industry, 1911, \$115,920.	Salaries, Bureau of Animal Industry, 1912, \$494,070.
Melvin, A. D..... Chief of bureau, at \$5,000..... \$5,000.00	1 chief of bureau..... \$5,000.00	1 chief of bureau..... \$5,000.00
Carroll, Charles C..... Chief clerk, at \$2,000..... 2,000.00	1 chief clerk..... 2,000.00	1 chief clerk (increase of \$500 submitted)..... 2,500.00
Pickens, J. M..... Editor and compiler, at \$2,000.. 2,000.00	1 editor and compiler..... 2,000.00	1 editor and compiler (increase of \$250 submitted)..... 2,250.00
Abel, Joseph..... Clerk, class 4..... 1,800.00	4 clerks, class 4..... 7,200.00	4 clerks, class 4..... 7,200.00
Chase, James L..... Clerk, class 4..... 1,800.00	5 clerks, class 3..... 8,000.00	10 clerks, class 3 (increase of 5 submitted, 2 by transfer from lump fund for general expenses, administrative expenses, 1 by transfer from lump fund for general expenses, inspection and quarantine, and 2 new places)..... 16,000.00
Newmyer, E. J..... Clerk, class 4..... 1,800.00	18 clerks, class 2..... 25,200.00	20 clerks, class 2 (increase of 2 by transfer from lump fund for general expenses, inspection and quarantine, and 2 by transfer from lump fund for general expenses, diseases of animals, and decrease of 2 by transfer to the Division of Accounts and Disbursements, making a net increase of 2 submitted)..... 28,000.00
Pew, I. W..... Clerk, class 4..... 1,800.00	1 clerk, at \$1,300..... 1,300.00	1 clerk..... 1,300.00
Cross, C. H..... Clerk, class 3..... 1,600.00	15 clerks, class 1..... 18,000.00	
La Pelle, Zebedee..... Clerk, class 3..... 1,600.00	14 clerks, at \$1,000 each..... 14,000.00	
Moran, H. E..... Clerk, class 3..... 1,600.00	6 clerks, at \$300 each..... 5,400.00	
Rice, J. A..... Clerk, class 3..... 1,600.00	3 clerks, at \$340 each..... 2,520.00	
Roberts, John..... Clerk, class 3..... 1,600.00	5 clerks, at \$720 each..... 3,600.00	
Bennett, E. A..... Clerk, class 2..... 1,400.00	1 clerk..... 700.00	
Cohran, J. R..... Clerk, class 2..... 1,400.00	1 instrument maker..... 1,200.00	
Corey, Charles R..... Clerk, class 2..... 1,400.00	1 messenger and custodian..... 1,000.00	
Fravel, F. R..... Clerk, class 2..... 1,400.00	3 messengers, at \$340 each..... 2,520.00	
Gibbs, B. H..... Clerk, class 2..... 789.44	4 messengers, at \$720 each..... 2,880.00	
Gregory, Fannie N..... Clerk, class 2..... 147.78	2 messenger boys, at \$480 each..... 960.00	
Gibbs, Henry C..... Clerk, class 2..... 700.00	1 messenger boy..... 360.00	
Swank, W. R..... Clerk, class 2..... 350.00	1 skilled laborer..... 840.00	
Haughton, Nellie F..... Clerk, class 2..... 1,400.00	1 skilled laborer..... 720.00	
Hornbaker, J. N..... Clerk, class 2..... 1,400.00	2 skilled laborers, at \$600 each..... 1,200.00	
Housman, Anna M..... Clerk, class 2..... 1,400.00	1 skilled laborer..... 660.00	
Johnston, E. C..... Clerk, class 2..... 1,400.00	1 illustrator..... 1,400.00	
Magee, R. W..... Clerk, class 2..... 1,400.00	4 laborers, at \$600 each..... 2,400.00	

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Animal Industry, 1910, \$114,100—Continued.</i>	<i>Salaries, Bureau of Animal Industry, 1911, \$115,920—Continued.</i>	<i>Salaries, Bureau of Animal Industry, 1912, \$494,070—Continued.</i>
Meyst, F. W. .... Clerk, class 2. .... { \$350.00	2 laborers, at \$480 each. .... \$960.00	17 clerks, class 2 (increase of 2 submitted by transfer from lump fund for general expenses, inspection and quarantine).... \$20,400.00
Ruddiman, Harry D. .... { 700.00	1 charwoman. .... 540.00	1 clerk (submitted by transfer from lump fund for general expenses, dairy industry)..... 1,080.00
More, F. C. .... Clerk, class 2. .... { 1,400.00	6 charwomen, at \$480 each. .... 2,880.00	21 clerks, at \$1,000 each (increase of 7 submitted, 5 by transfer from lump fund for general expenses, inspection and quarantine, 1 by transfer from lump fund for general expenses, dairy industry, and 1 by transfer from lump fund for general expenses, ticks)..... 21,000.00
Myers, Carrie. .... Clerk, class 2. .... { 1,400.00	2 charwomen, at \$240 each. .... 480.00	13 clerks, at \$900 each (increase of 7 submitted, 1 by transfer from lump fund for general expenses, dairy industry, 4 by transfer from lump fund for general expenses, ticks, 1 by transfer from lump fund for general expenses, inspection and quarantine, and 1 by transfer from lump fund for general expenses, diseases of animals)..... 11,700.00
Sartz, R. S. N. .... Clerk, class 2. .... { 1,400.00	<b>Total amount of above appropriation (an increase over 1910 of \$1,820)..... 115,920.00</b>	6 clerks, at \$840 each (increase of 3 submitted by transfer from lump fund for general expenses, ticks)..... 5,040.00
Lee, Wm. C. .... Clerk, at \$1,300. .... { 1,300.00		5 clerks, at \$720 each. .... 3,600.00
Allen, Burr. .... Clerk, class 1. .... { 1,200.00		1 clerk. .... 700.00
Dent, Mary T. .... Clerk, class 1. .... { 1,150.00		1 architect (submitted by transfer from lump fund for general expenses, dairy industry)..... 900.00
Fagan, Mary E. .... Clerk, class 1. .... { 1,200.00		1 illustrator. .... 1,400.00
Gardner, Edith F. .... Clerk, class 1. .... { 1,200.00		1 assistant at experiment station (submitted by transfer from lump fund for general expenses, diseases of animals)..... 1,400.00
Gibbs, Henry C. .... Clerk, class 1. .... { 600.00		4 inspector's assistants, at \$1,000 each (submitted by transfer from lump fund for general expenses, inspection and quarantine)..... 4,000.00
Porter, Harry W. .... { 600.00		12 inspector's assistants, at \$840 each (submitted by transfer from lump fund for general expenses, inspection and quarantine)..... 10,080.00
Hatchitt, Nina. .... Clerk, class 1. .... { 573.33		1 laboratory assistant (submitted by transfer from lump fund for general expenses, diseases of animals)..... 900.00
Walters, Mildred E. .... { 600.00		1 laboratory helper (submitted by transfer from lump fund for general expenses, dairy industry)..... 720.00
Mahon, M. H. .... Clerk, class 1. .... { 1,200.00		1 instrument maker. .... 1,200.00
Ormsby, Andrew A. .... Clerk, class 1. .... { 1,200.00		1 carpenter (submitted by transfer from lump fund for general expenses, diseases of animals)..... 1,100.00
Pirtle, T. R. .... Clerk, class 1. .... { 1,200.00		2 carpenters, at \$1,000 each (submitted by transfer from lump fund for general expenses, diseases of animals)..... 2,000.00
Puette, Grace. .... Clerk, class 1. .... { 1,200.00		1 messenger and custodian. .... 1,000.00
Ruddiman, Harry D. .... Clerk, class 1. .... { 600.00		8 messengers or laborers, at \$840 each (increase of 4 submitted, 3 by transfer from lump fund for general expenses, diseases of animals, and 1 by transfer from lump fund for general expenses, Animal Husbandry)..... 6,720.00
Sherman, Caroline B. .... { 600.00		10 messengers or laborers, at \$720 each (increase of 5 submitted, 4 by transfer from lump fund for general expenses, diseases of animals, and 1 by transfer from lump fund for general expenses, inspection and quarantine).... 7,200.00
Sehorn, Victor H. .... Clerk, class 1. .... { 1,200.00		22 messengers, messenger boys, or laborers, at \$480 each (increase of 18 submitted, 14 by transfer from lump fund for general expenses, diseases of animals, 2 by transfer from lump fund for general expenses, animal husbandry, and 2 by transfer from lump fund for general expenses, administrative expenses)..... 10,560.00
Summer, Louis C. .... Clerk, class 1. .... { 913.33		
Tyson, Fanny. .... Clerk, class 1. .... { 1,200.00		
Harter, Eugene C. .... Clerk, at \$1,000. .... { 41.67		
Porter, Harry W. .... { 500.00		
Bingman, Harry. .... Clerk, at \$1,000. .... { 1,000.00		
Fieid, James E. .... Clerk, at \$1,000. .... { 1,000.00		
Henderson, Alice. .... Clerk, at \$1,000. .... { 850.56		
Jones, Willie W. .... Clerk, at \$1,000. .... { 500.00		
Lewis, Lula. .... Clerk, at \$1,000. .... { 1,000.00		
Lipp, Paul H. .... Clerk, at \$1,000. .... { 1,000.00		
McFarland, Hattie B. .... Clerk, at \$1,000. .... { 1,000.00		
Raub, Ruth D. .... Clerk, at \$1,000. .... { 997.23		
Ricketts, Hoyte. .... Clerk, at \$1,000. .... { 869.46		
Ross, Phebe Ann. .... { 125.01		
Smith, Robert H., jr. .... Clerk, at \$1,000. .... { 1,000.00		
Thorwarth, Estella S. .... Clerk, at \$1,000. .... { 1,000.00		
Sherman, Caroline B. .... Clerk, at \$1,000. .... { 500.00		
Walters, Mildred E. .... Clerk, at \$1,000. .... { 500.00		
Armstrong, Jesse V. .... Clerk, at \$900. .... { 892.50		
Jones, Willie W. .... Clerk, at \$900. .... { 450.00		
Manderfield, Bina. .... Clerk, at \$900. .... { 450.00		
Rapp, Emma V. .... Clerk, at \$900. .... { 657.50		
Wood, Elizabeth J. .... Clerk, at \$900. .... { 900.00		
Krause, Lillian A. .... Clerk, at \$840. .... { 420.00		
Manderfield, Bina. .... { 420.00		
Paulson, Fannie E. .... Clerk, at \$840. .... { 840.00		
Phillips, Ella M. .... Clerk, at \$840. .... { 840.00		
Eldridge, J. E. .... Clerk, at \$720. .... { 10.00		
Johnson, Victorine E. .... { 120.00		
Jump, W. Ashby. .... Clerk, at \$720. .... { 360.00		
Langille, Letitia A. .... Clerk, at \$720. .... { 720.00		
Murphy, Carrie L. .... Clerk, at \$720. .... { 720.00		
Sands, Laura A. .... Clerk, at \$720. .... { 720.00		
Brough, William. .... Mechanic, at \$1,200. .... { 1,200.00		
Stedman, R. G. .... Messenger and custodian, at \$1,000. .... { 750.00		
Thompson, R. E. L. .... Carpenter, at \$1,100. .... { 229.16		
Wilson, Charles C. .... Carpenter, at \$900. .... { 870.83		
Freedman, Charles. .... Carpenter, at \$900. .... { 900.00		
Haislip, Albert L. .... Carpenter, at \$900. .... { 708.12		
Wilson, Charles C. .... Carpenter, at \$900. .... { 187.50		
Nelson, Charles W. C. .... Carpenter, at \$900. .... { 873.44		
Davis, F. C. .... Painter, at \$900. .... { 790.00		
Hughes, Harry M. .... { 52.50		
Castleman, Stephen D. .... Messenger, at \$840. .... { 245.00		
Perry, J. M. .... Messenger, at \$840. .... { 245.00		
Reamy, Thomas B. .... { 562.33		
Stedman, William P. .... Messenger, at \$840. .... { 840.00		
Mull, R. B. .... Messenger, at \$720. .... { 720.00		
Nicholas, John. .... Messenger, at \$720. .... { 720.00		
Wesley, Charles. .... Messenger, at \$720. .... { 720.00		
Schimoneck, Wm. C. .... Messenger, at \$720. .... { 720.00		
Cowles, Allen P. .... Messenger boy, at \$480. .... { 340.00		
Griffith, Gardner L. .... { 124.00		
Eldridge, J. E. .... Messenger boy, at \$480. .... { 193.33		
Goetz, Lena B. .... Skilled laborer, at \$840. .... { 840.00		
Kengla, G. A. .... Skilled laborer, at \$720. .... { 720.00		
Perry, J. M. .... Skilled laborer, at \$720. .... { 510.00		
Berlin, S. S. .... Skilled laborer, at \$600. .... { 600.00		
Phillips, Annie E. .... Skilled laborer, at \$600. .... { 600.00		
Scheerer, George W. .... Skilled laborer, at \$660. .... { 660.00		
Haines, W. S. D. .... Illustrator, at \$1,400. .... { 1,400.00		
Epps, Richard. .... Laborer, at \$600. .... { 600.00		
Sullivan, Maggie E. .... Laborer, at \$600. .... { 600.00		
Willis, Charles P. .... Laborer, at \$600. .... { 600.00		
De Atley, Alice V. .... Charwoman, at \$540. .... { 540.00		
Atkins, Emma J. .... Charwoman, at \$480. .... { 480.00		
Hughes, M. L. .... Charwoman, at \$480. .... { 480.00		
Jones, Jennie. .... Charwoman, at \$480. .... { 480.00		
Madella, S. W. .... Charwoman, at \$480. .... { 480.00		
Ridley, Cora M. .... Charwoman, at \$480. .... { 480.00		
Winfield, Fannie E. .... Charwoman, at \$480. .... { 480.00		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Animal Industry, 1910, \$114,100—Continued.</i>	<i>Salaries, Bureau of Animal Industry, 1911, \$115,920—Continued.</i>	<i>Salaries, Bureau of Animal Industry, 1912, \$494,070—Continued.</i>
Jordan, Willie E..... Charwoman, at \$240..... \$240.00		3 messengers or messenger boys, at \$360 each (increase of 2 submitted, 1 by transfer from lump fund for general expenses, administrative expenses, and 1 by transfer from lump fund for general expenses, animal husbandry)..... \$1,080.00
Reld, Helen G..... Charwoman, at \$240..... 90.00		1 skilled laborer (submitted by transfer from lump fund for general expenses, inspection and quarantine)..... 1,600.00
Total..... 105,029.02		4 skilled laborers, at \$900 each (submitted) (2 by transfer from lump fund for general expenses, inspection and quarantine, and 2 by transfer from lump fund for general expenses, diseases of animals)..... 3,600.00
Unexpended balance..... 9,070.98		2 laborers, at \$660 each (increase of 1 submitted by transfer from lump fund for general expenses, diseases of animals)..... 1,320.00
Total amount of above appropriation..... 114,100.00		9 laborers, at \$600 each (increase of 3 submitted by transfer from lump fund for general expenses, diseases of animals)..... 5,400.00
		3 laborers, at \$540 each (by transfer from lump fund for general expenses, diseases of animals)..... 1,620.00
		1 watchman (submitted by transfer from lump fund for general expenses, diseases of animals)..... 720.00
		1 charwoman..... 540.00
		7 charwomen, at \$480 each (increase of 1 submitted by transfer from lump fund for general expenses, administrative expenses)..... 3,360.00
		2 charwomen, at \$240 each..... 480.00
		NOTE.—The following employees have been transferred from the lump fund appropriation "Meat Inspection, Bureau of Animal Industry," but that appropriation has not been reduced, as it is a permanent appropriation. The amount of the transfer is \$480,020.
		1 architect..... 2,000.00
		2 senior clerks, at \$1,800 each..... 3,600.00
		1 clerk..... 1,680.00
		2 clerks, class 3..... 3,200.00
		1 clerk..... 1,500.00
		2 junior clerks, at \$1,400 each..... 2,800.00
		2 junior clerks, at \$1,350 each..... 2,760.00
		2 junior clerks, at \$1,320 each..... 2,640.00
		1 junior clerk..... 1,260.00
		19 junior clerks, at \$1,200 each..... 22,800.00
		1 under clerk..... 1,100.00
		24 under clerks, at \$1,000 each..... 24,000.00
		2 under clerks, at \$960 each..... 1,920.00
		30 under clerks, at \$900 each..... 27,000.00
		13 under clerks, at \$840 each..... 10,920.00
		2 under clerks, at \$720 each..... 1,440.00
		1 laboratory helper..... 1,020.00
		2 laboratory helpers, at \$840 each..... 1,680.00
		1 messenger and custodian..... 1,200.00
		1 messenger..... 840.00
		1 messenger boy..... 480.00
		3 messenger boys, at \$360 each..... 1,080.00
		1 charwoman..... 600.00
		4 charwomen, at \$480 each..... 1,920.00
		4 charwomen, at \$360 each..... 1,440.00
		1 charwoman..... 300.00
		1 laborer..... 780.00
		1 painter..... 600.00
		29 skilled laborers, at \$900 each..... 26,100.00
		2 skilled laborers, at \$840 each..... 1,680.00
		7 skilled laborers, at \$720 each..... 5,040.00
		32 inspector's assistants, at \$1,000 each..... 32,000.00
		1 inspector's assistant..... 900.00
		133 inspector's assistants, at \$840 each..... 111,720.00
		Total amount estimated (an apparent increase over 1911 of \$378,150)..... 494,070.00
		NOTE.—There is an apparent increase in the above appropriation of \$378,150. Of

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Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Bureau of Animal Industry, 1910, \$114,100—Continued.	Salaries, Bureau of Animal Industry, 1911, \$115,920—Continued.	Salaries, Bureau of Animal Industry, 1912, \$494,070—Continued.
		this sum \$377,000 covers the transfer of 423 employees from the lump-fund appropriations. Of this number 93 employees, whose salaries aggregate \$77,000, were transferred from the lump-fund appropriation for general expenses, and that appropriation has been reduced accordingly. Three hundred and thirty employees, whose salaries aggregate \$300,000, were transferred from the permanent appropriation for meat inspection, but that appropriation has not been reduced, as it is a permanent appropriation, and as additional money is needed for meat inspection work. Three thousand nine hundred and fifty dollars is for promotions and new places, as follows: Five hundred dollars is submitted for the promotion of the chief clerk of the bureau, and \$250 for an increase in salary of the editor and compiler. Two new places, clerks, class 3, are submitted. Two clerks, class 2, have been transferred to the Division of Accounts and Disbursements. The changes in detail are as follows:
		Promotions:
		1 chief clerk..... \$500.00
		1 editor and compiler..... 250.00
		New places:
		2 clerks, class 3..... 3,200.00
		Transfers from lump fund for general expenses:
		6 employees from administrative expenses..... 5,000.00
		8 employees from ticks..... 7,120.00
		5 employees from dairy industry..... 4,600.00
		4 employees from animal husbandry..... 2,160.00
		39 employees from diseases of animals..... 27,820.00
		31 employees from inspection and quarantine..... 30,300.00
		Transfers from meat inspection:
		330 employees from the permanent appropriation meat inspection..... 300,000.00
		380,950.00
		Transfers to Division of Accounts and Disbursements:
		2 clerks, class 2..... 2,800.00
		378,150.00
The above force performed the following duties:	The above force is performing the following duties:	The above force will perform the following duties:
Administration..... \$13,768.33	Administration..... \$12,840.00	Administration..... 13,500.00
Inspection Division..... 6,435.56	Inspection Division..... 10,320.00	Inspection Division..... 368,880.00
Quarantine Division..... 1,697.78	Quarantine Division..... 3,500.00	Quarantine Division..... 6,500.00
Dairy Division..... 17,790.00	Dairy Division..... 17,340.00	Dairy Division..... 20,000.00
Animal Husbandry Division..... 3,375.97	Animal Husbandry Division..... 4,220.00	Animal Husbandry Division..... 6,000.00
Biochemic Division..... 4,240.00	Biochemic Division..... 4,480.00	Biochemic Division..... 5,000.00
Pathological Division..... 9,327.33	Pathological Division..... 8,780.00	Pathological Division..... 9,000.00
Zoological Division..... 3,140.00	Zoological Division..... 3,720.00	Zoological Division..... 4,000.00
Editorial Office..... 8,520.00	Editorial Office..... 8,520.00	Editorial Office..... 8,520.00
Office of Accounts..... 10,819.16	Office of Accounts..... 14,960.00	Office of Accounts..... 16,840.00
Appointment Section..... 6,718.11	Appointment Section..... 10,760.00	Appointment Section..... 11,620.00
File room..... 4,500.00	File room..... 4,100.00	File room..... 7,390.00
Library..... 2,670.56	Library..... 2,840.00	Library..... 2,840.00
Property room..... 4,896.67	Property and supply room..... 8,240.00	Property and supply room..... 12,300.00
Carpenter shop..... 7,131.55	Machine shop..... 1,200.00	Machine shop..... 1,680.00
Total..... 105,029.02	Total..... 115,920.00	Total..... 494,070.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Animal Industry, 1910, inspection and quarantine, \$625,000.</i>		
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington.....	In Washington.....
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery.....	Stationery.....	Stationery.....
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc.....
Furniture.....	Furniture.....	Furniture.....
Fuel.....	Rent.....	Rent.....
Freight.....	Travel expenses.....	Travel expenses.....
Telephone.....		
Rent.....		
Gas and electricity.....		
Apparatus, instruments, and laboratory materials.....		
Travel and station and field expenses.....		
Total expenditures to Aug. 31, 1910.....		
Less repayments to credit of appropriation.....		
Net expenditures to Aug. 31, 1910.....		
Outstanding liabilities Aug. 31, 1910 (estimated).....		
Balance to be turned back to Treasury (estimated).....		
Total amount of above appropriation.....	Total amount of above appropriation (a decrease from 1910 of \$2,000).....	Total amount estimated (a decrease from 1911 of \$30,300).....
PROJECTS.		
(1) Eradication of scabies in sheep:	(1) Eradication of scabies in sheep:	(1) Eradication of scabies in sheep:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
This work has for its ultimate object the complete eradication from the United States of the contagious disease known as "scabies" or "scab" of sheep. The methods employed are quarantine, inspection, dipping of affected or exposed animals in disinfecting solutions for the destruction of the mites which cause the disease, disinfection of cars, stockyards, etc. The work was conducted in North Dakota, South Dakota, Kansas, Nebraska, Colorado, Montana, Wyoming, Utah, Oregon, California, Nevada, New Mexico, Arizona, and Texas. The prevalence of the disease and the area in which it exists have been greatly reduced.		
(2) Eradication of scabies in cattle:	(2) Eradication of scabies in cattle:	(2) Eradication of scabies in cattle:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
This disease is similar to scabies of sheep, and the object of the work and the methods followed are the same. During the fiscal year the work was carried on in North Dakota, South Dakota, Kansas, Nebraska, Colorado, Montana, Wyoming, Oklahoma, Texas, and New Mexico.		
(3) Inspection of southern cattle:	(3) Inspection of southern cattle:	(3) Inspection of southern cattle:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
This work consists in the inspection of cattle in sections quarantined or provisionally quarantined on account of Texas or southern cattle fever, to determine whether they carry infection and under what conditions they are entitled to move out of these sections, and in following up work of tick eradication so as to hold ground gained and prevent reinfection.		
(4) Supervision of transportation of live stock and inspection of vessels:	(4) Supervision of transportation of live stock and inspection of vessels:	(4) Supervision of transportation of live stock and inspection of vessels:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
Animals are inspected at shipping and stock centers in order to prevent the spread of contagious diseases through interstate commerce. The shipment of live stock is also supervised with a view to the enforcement of the act of June 29, 1906, commonly known as the "28-hour law."		

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## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Animal Industry, 1910, inspection and quarantine, \$625,000—Continued.</i>	<i>General expenses, Bureau of Animal Industry, 1911, inspection and quarantine, \$623,000—Con.</i>	<i>General expenses, Bureau of Animal Industry, 1912, inspection and quarantine, \$592,700—Con.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(5) Inspection and quarantine of imported animals:	(5) Inspection and quarantine of imported animals:	(5) Inspection and quarantine of imported animals:
Salaries..... \$27,600.50	Salaries..... \$30,000.00	Salaries..... \$24,900.00
Travel expense..... 5,250.00	Travel expense..... 6,200.00	Travel expense..... 6,200.00
Miscellaneous expense..... 9,308.00	Miscellaneous expense..... 9,400.00	Miscellaneous expense..... 9,400.00
42,158.50	45,600.00	40,500.00
All animals offered for importation are carefully inspected, and some are quarantined, to prevent the introduction of contagious diseases. Quarantine stations are maintained at several places.		
(6) Inspection work relative to existence of contagious diseases and tuberculin and mallein testing of animals:	(6) Inspection work relative to existence of contagious diseases and tuberculin and mallein testing of animals:	(6) Inspection work relative to existence of contagious diseases and tuberculin and mallein testing of animals:
Salaries..... 49,467.98	Salaries..... 51,000.00	Salaries..... 44,000.00
Travel expense..... 23,094.59	Travel expense..... 26,000.00	Travel expense..... 26,000.00
Miscellaneous expense..... 6,342.20	Miscellaneous expense..... 6,000.00	Miscellaneous expense..... 6,000.00
78,904.77	83,000.00	76,000.00
This covers miscellaneous field work, such as investigation of reported outbreaks of disease, inspections to determine whether certain contagious diseases exist, and testing of cattle for tuberculosis and horses for glanders.		
		<i>General expenses, Bureau of Animal Industry, 1912. Establishment of animal quarantine stations at Baltimore, Md., and Boston, Mass., \$65,000.</i>
		Purchase of suitable land for the establishment of quarantine stations, erection of buildings thereon and the equipment of same, at the ports of Baltimore, Md., and Boston, Mass. .... \$65,000.00
		Total amount estimated. 65,000.00
<i>General expenses, Bureau of Animal Industry, 1910 (eradicating cattle ticks), \$250,000.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (eradicating cattle ticks), \$260,000.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (eradicating cattle ticks), \$267,880.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$2,144.00	In Washington..... \$2,000.00	In Washington..... \$2,000.00
Out of Washington..... 180,462.19	Out of Washington..... 184,000.00	Out of Washington..... 193,000.00
Stationery..... 204.20	Stationery..... 225.00	Stationery..... 225.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,652.11	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc..... 3,900.00	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc..... 6,780.00
Furniture..... 125.20	Furniture..... 125.00	Furniture..... 125.00
Freights..... 1,108.02	Rent..... 750.00	Rent..... 750.00
Telephone..... 65.76	Travel expense..... 59,000.00	Travel expense..... 65,000.00
Rent..... 726.00		
Apparatus, instruments, and laboratory materials..... 468.90		
Travel and station and field expenses..... 55,231.32		
Total expenditures to Aug. 31, 1910..... 242,187.76		
Less repayments to credit of appropriation..... 11.60		
Net expenditures to Aug. 31, 1910..... 242,176.10		
Outstanding liabilities Aug. 31, 1910 (estimated)..... 1,414.97		
Balance to be turned back to Treasury (estimated)..... 6,408.93		
	Total amount of above appropriation (no increase or decrease)..... 250,000.00	Total amount estimated (an increase over 1911 of \$17,880)..... 267,880.00
Total amount of above appropriation..... 250,000.00		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Eradication of southern cattle ticks:	(1) Eradication of southern cattle ticks:	(1) Eradication of southern cattle ticks:
Salaries..... 182,606.19	Salaries..... 186,000.00	Salaries..... 195,000.00
Travel expense..... 55,931.32	Travel expense..... 59,000.00	Travel expense..... 65,000.00
Miscellaneous expense..... 5,065.16	Miscellaneous expense..... 5,000.00	Miscellaneous expense..... 7,880.00
243,602.67	250,000.00	267,880.00
This work has been carried on in cooperation with State authorities in Virginia, North Carolina, South Carolina, Georgia, Alabama, Tennessee, Kentucky, Missouri, Arkansas, Oklahoma, Louisiana, Texas, and California under special appropriations, and consists in the extermination of the ticks which transmit the infection of Texas or southern cattle fever. The results so far indicate that the ultimate complete extermination of this costly pest is entirely practicable.		

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## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Animal Industry, 1910 (dairy industry), \$149,000.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (dairy industry), \$147,600.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (dairy industry), \$155,000.</i>
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington.....	In Washington.....
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery.....	Stationery.....	Stationery.....
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, experimental dairy products, laboratory apparatus, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, experimental dairy products, laboratory apparatus, etc.....
Furniture.....	Furniture.....	Furniture.....
Freight.....	Rent.....	Rent.....
Express.....	Travel expense.....	Travel expense.....
Telephone.....		
Rent.....		
Gas and electricity.....		
Apparatus, instruments, and laboratory materials.....		
Travel and station and field expenses.....		
Total expenditures to Aug. 31, 1910.....		
Less repayments to credit of appropriation.....		
Net expenditures to Aug. 31, 1910.....		
Outstanding liabilities Aug. 31, 1910 (estimated).....		
Balance to be turned back to Treasury (estimated).....		
<b>Total amount of above appropriation..... 149,000.00</b>	<b>Total amount of above appropriation (a decrease from 1910 of \$1,400)..... 147,600.00</b>	<b>Total amount estimated (an increase over 1911 of \$7,400)..... 155,000.00</b>
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) Investigations and experiments in dairy industry:	(1) Investigations and experiments in dairy industry:	(1) Investigations and experiments in dairy industry:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
This work includes investigations in the manufacture, transportation, and storage of butter; the manufacture of American cheddar, Swiss, and other European varieties of cheese, and the problems incident to their storage and distribution; the problems involved in supplying cities with pure milk; investigation of milk secretion, including the effect of feed, water, breed, and individuality of the animal on the composition of the milk; investigations in the organization and management of dairy enterprises from an economic standpoint, including the collection of monthly reports from creameries and cheese factories to obtain information for the improvement of methods in common use.		
(2) Inspection of renovated butter factories and markets:	(2) Inspection of renovated butter factories and markets:	(2) Inspection of renovated butter factories and markets:
Salaries.....	Salaries.....	Salaries.....
Travel expense.....	Travel expense.....	Travel expense.....
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
This inspection is maintained under act of Congress of May 9, 1902.		
<i>General expenses, Bureau of Animal Industry, 1910 (animal husbandry), \$43,000.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (animal husbandry), \$42,000.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (animal husbandry), \$55,480.</i>
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington.....	In Washington.....
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery.....	Stationery.....	Stationery.....
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, experimental animals, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, experimental animals, etc.....
Furniture.....	Furniture.....	Furniture.....
Fuel.....	Travel expense.....	Travel expense.....
Freight.....		
Express.....		
Telephone.....		
Apparatus, instruments, and laboratory materials.....		
Travel and station and field expenses.....		
Total expenditures to Aug. 31, 1910.....		
Outstanding liabilities Aug. 31, 1910 (estimated).....		
Balance to be turned back to Treasury (estimated).....		
<b>Total amount of above appropriation..... 43,000.00</b>	<b>Total amount of above appropriation (a decrease from 1910 of \$1,000)..... 42,000.00</b>	<b>Total amount estimated (an increase over 1911 of \$13,480)..... 55,480.00</b>

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## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Animal Industry, 1910 (animal husbandry), \$43,000—Continued.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (animal husbandry), \$42,000—Continued.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (animal husbandry), \$55,480—Continued.</i>
PROJECTS.	PROJECTS.	PROJECTS.
(1) Investigations and experiments in animal husbandry:	(1) Investigations and experiments in animal husbandry:	(1) Investigations and experiments in animal husbandry:
Salaries..... \$17,141.16	Salaries..... \$23,000.00	Salaries..... \$30,000.00
Travel expense..... 4,195.52	Travel expense..... 4,500.00	Travel expense..... 9,000.00
Miscellaneous expense..... 12,260.15	Miscellaneous expense..... 14,500.00	Miscellaneous expense..... 16,480.00
33,596.83	42,000.00	55,480.00
This work includes supervision of pedigree record associations under paragraph 492 of the tariff act of Aug. 5, 1909; experiments in feeding cottonseed products to hogs to determine the effects of such products and to devise a safe method of feeding them; experiments in feeding and breeding poultry, and investigations in proper farm handling of eggs intended for market; efforts to devise a uniform classification for American carriage horses for use at fairs and to encourage the breeding of such horses, and experiments in breeding small animals to elucidate problems of heredity with regard to inbreeding, crossbreeding, selection, telegony, etc.		
<i>General expenses, Bureau of Animal Industry, 1910 (diseases of animals), \$109,000.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (diseases of animals), \$108,000.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (diseases of animals), \$80,180.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$49,383.03	In Washington..... \$56,000.00	In Washington..... \$36,000.00
Out of Washington..... 8,890.58	Out of Washington..... 6,000.00	Out of Washington..... 4,500.00
Stationery..... 262.57	Stationery..... 250.00	Stationery..... 250.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 33,916.86	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc..... 40,400.00	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, experimental animals, forage, lumber, livery service, laboratory apparatus, etc..... 34,080.00
Furniture..... 49.50	Furniture..... 50.00	Furniture..... 50.00
Fuel..... 651.88	Rent..... 300.00	Rent..... 300.00
Freight..... 32.04	Travel expense..... 5,000.00	Travel expense..... 5,000.00
Telephone..... 24.10		
Rent..... 300.00		
Gas and electricity..... 211.19		
Apparatus, instruments, and laboratory materials..... 3,586.98		
Travel and station and field expenses..... 4,066.97		
Total expenditures to Aug. 31, 1910..... 101,375.70		
Less repayments to credit of appropriation..... 8.87		
Net expenditures to Aug. 31, 1910..... 101,366.83		
Outstanding liabilities Aug. 31, 1910 (estimated)..... 354.64		
Balance to be turned back to Treasury (estimated)..... 7,278.53		
Total amount of above appropriation..... 109,000.00	Total amount of above appropriation (a decrease from 1910 of \$1,000)..... 108,000.00	Total amount estimated (a decrease from 1911 of \$27,820)..... 80,180.00
PROJECTS.	PROJECTS.	PROJECTS.
(1) Scientific investigations of diseases of animals:	(1) Scientific investigations of diseases of animals:	(1) Scientific investigations of diseases of animals:
Salaries..... 58,273.61	Salaries..... 62,000.00	Salaries..... 40,500.00
Travel expense..... 4,216.97	Travel expense..... 5,000.00	Travel expense..... 5,000.00
Miscellaneous expense..... 39,239.76	Miscellaneous expense..... 41,000.00	Miscellaneous expense..... 34,680.00
101,730.34	108,000.00	80,180.00
Some of the diseases investigated are hog cholera, tuberculosis, glanders, rabies, mycotic stomatitis, quail disease, Malta fever in imported goats, surra in imported cattle, fowl cholera, and parasitic diseases of sheep and other animals.		
<i>General expenses, Bureau of Animal Industry, 1910 (purchase of land), \$25,000.</i>		
PROJECT.		
(1) Purchase of land for experimental station:		
Cost..... \$25,000.00		
Total expenditure to Aug. 31, 1910..... 25,000.00		
Total amount of above appropriation..... 25,000.00		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses Bureau of Animal Industry, 1910 (purchase of land), \$25,000—Continued.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (experimental farm), \$12,000.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (experimental farm), \$25,000.</i>
	Salaries:	Salaries:
	In Washington.....	In Washington.....
	Out of Washington.....	Out of Washington.....
	Stationery.....	Stationery.....
	Miscellaneous supplies and services, including freight, express, telegraph, telephone, lumber, livery, etc..... \$12,000.00	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, animals, forage, lumber, livery service, etc..... \$17,650.00
	Furniture.....	Furniture..... 200.00
	Travel expense.....	Travel expense..... 150.00
	Total amount of above appropriation..... 12,000.00	Total amount of above appropriation (an increase over 1911 of \$13,000)..... 25,000.00
	PROJECT.	PROJECT.
	(1) For all necessary expenses for the equipment of a bureau experiment station, including the necessary construction and alterations of buildings thereon, the construction and repair of fences, drains, and other incidental work:	(1) For all necessary expenses for the equipment of a bureau experiment station, including the necessary construction and alterations of buildings thereon, the construction and repair of fences, roadways, drains, and for the maintenance of farm, including salaries of assistants and laborers, forage, light, power, fuel, and other incidental work:
	Salaries.....	Salaries..... 7,000.00
	Travel expense.....	Travel expense..... 150.00
	Miscellaneous expense..... 12,000.00	Miscellaneous expense..... 17,850.00
	12,000.00	25,000.00
<i>General expenses, Bureau of Animal Industry, 1910 (administrative expenses), \$62,760.</i>	<i>General expenses, Bureau of Animal Industry, 1911 (administrative expenses), \$51,940.</i>	<i>General expenses, Bureau of Animal Industry, 1912 (administrative expenses), \$46,940.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$32,448.66	In Washington..... \$33,000.00	In Washington..... \$28,000.00
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery..... 5,961.32	Stationery..... 7,000.00	Stationery..... 7,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 4,105.36	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, laboratory apparatus, etc..... 4,076.00	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, lumber, livery service, laboratory apparatus, etc..... 4,076.00
Furniture..... 1,151.84	Furniture..... 1,200.00	Furniture..... 1,200.00
Fuel.....	Rent..... 2,664.00	Rent..... 2,664.00
Freight..... 28.60	Travel expense..... 4,000.00	Travel expense..... 4,000.00
Express..... 790.98		
Telegraph..... 565.65		
Telephone..... 331.31		
Rent..... 1,391.42		
Gas and electricity..... 102.63		
Apparatus, instruments, and laboratory materials..... 299.82		
Travel and station and field expenses..... 3,646.19		
Total expenditures to Aug. 31, 1910..... 50,823.78	Total amount of above appropriation (a decrease from 1910 of \$10,820)..... 51,940.00	Total amount estimated (a decrease from 1911 of \$5,000)..... 46,940.00
Outstanding liabilities, Aug. 31, 1910 (estimated)..... 1,169.60	PROJECT.	PROJECT.
Balance to be turned back to Treasury (estimated)..... 10,766.62	(1) General administrative work:	(1) General administrative work:
	Salaries..... 33,000.00	Salaries..... 28,000.00
	Travel expense..... 4,000.00	Travel expense..... 4,000.00
	Miscellaneous expense..... 14,940.00	Miscellaneous expense..... 14,940.00
	51,940.00	46,940.00
Total amount of above appropriation..... 62,760.00		
PROJECT.		
(1) General administrative work:		
Salaries..... 32,448.66		
Travel expense..... 4,000.00		
Miscellaneous expense..... 15,544.72		
51,993.38		
This covers the general administration and supervision of the bureau's work and includes all expenditures not otherwise chargeable.		

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## Bureau of Animal Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Cooperative experiments in animal feeding and breeding, 1910, \$50,000.</i>		
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington..... \$3,000.00	In Washington..... \$3,000.00
Out of Washington.....	Out of Washington..... 25,000.00	Out of Washington..... 25,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, livery service, laboratory materials, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, lights, livery service, laboratory materials, etc.....
16,516.06	19,000.00	19,000.00
Fuel.....	Travel expense.....	Travel expense.....
349.91	3,000.00	3,000.00
Freight.....		
404.05		
Telephone.....		
65.07		
Rent.....		
100.00		
Gas and electricity.....		
302.40		
Apparatus, instruments, and laboratory materials.....		
19.44		
Travel and station and field expenses.....		
2,462.94		
Total expenditures to Aug. 31, 1910.....		
42,886.43		
Outstanding liabilities Aug. 31, 1910 (estimated).....		
2,613.57		
Balance to be turned back to Treasury (estimated).....		
4,500.00		
<b>Total amount of above appropriation..... 50,000.00</b>	<b>Total amount of above appropriation (no increase or decrease)..... 50,000.00</b>	<b>Total amount estimated (no increase or decrease)..... 50,000.00</b>
PROJECTS.		
(1) Animal feeding and breeding:	(1) Animal feeding and breeding:	(1) Animal feeding and breeding:
Salaries.....	Salaries.....	Salaries.....
22,666.56	28,000.00	28,000.00
Travel expense.....	Travel expense.....	Travel expense.....
19,870.50	3,000.00	3,000.00
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
45,500.00	19,000.00	19,000.00
	<b>50,000.00</b>	<b>50,000.00</b>
This work is conducted both independently and in cooperation with State experiment stations under a special appropriation of \$50,000. It consists of southern beef production in Alabama; breeding American carriage horses in Colorado; breeding gray draft horses in Iowa; poultry breeding in Maine; breeding milking Shorthorns in Minnesota; producing strain of Holstein dairy cattle adapted to North Dakota in North Dakota; animal nutrition investigations in Pennsylvania; Morgan horse breeding in Vermont; and sheep breeding to develop breed suited to range conditions in Wyoming.		
<i>Meat inspection, Bureau of Animal Industry, 1910, \$3,000,000.</i>		
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington..... \$100,000.00	In Washington..... \$60,000.00
Out of Washington.....	Out of Washington..... 2,793,500.00	Out of Washington..... 2,833,000.00
Stationery.....	Stationery.....	Stationery.....
3,950.57	5,000.00	5,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, gas and electricity, livery service, laboratory apparatus, etc.....	Miscellaneous supplies and services, including fuel, freight, express, telegraph, telephone, gas and electricity, livery service, laboratory apparatus, etc.....
13,308.14	20,000.00	20,000.00
Furniture.....	Furniture.....	Furniture.....
531.09	1,000.00	1,000.00
Fuel.....	Rent.....	Rent.....
5.25	18,000.00	18,000.00
Freight.....	Meat-inspection stamps, certificates, tags, hog rings, seals, disks, sealing presses, brands, etc.....	Meat-inspection stamps, certificates, tags, hog rings, seals, disks, sealing presses, brands, etc.....
661.99	15,000.00	15,000.00
Express.....	Travel expenses.....	Travel expenses.....
462.23	47,500.00	48,000.00
Telegraph.....		
113.55		
Telephone.....		
2,957.71		
Rent.....		
17,915.06		
Gas and electricity.....		
180.76		
Apparatus, instruments, and laboratory materials.....		
9,946.79		
Travel and station and field expenses.....		
46,283.02		
Total expenditures to Aug. 31, 1910.....		
2,924,129.90		
Less repayments to credit of appropriation.....		
195.22		
Net expenditures to Aug. 31, 1910.....		
2,923,934.68		
Outstanding liabilities Aug. 31, 1910 (estimated).....		
13,565.32		
Balance to be turned back to Treasury (estimated).....		
62,500.00		
<b>Total amount of above appropriation..... 3,000,000.00</b>	<b>Total amount of above appropriation (permanent appropriation)..... 3,000,000.00</b>	<b>Total amount of above appropriation (permanent appropriation)..... 3,000,000.00</b>
PROJECT.		
(1) Meat inspection:	(1) Meat inspection:	(1) Meat inspection:
Salaries.....	Salaries.....	Salaries.....
2,827,813.74	2,893,500.00	2,893,000.00
Travel expense.....	Travel expense.....	Travel expense.....
51,283.02	47,500.00	48,000.00
Miscellaneous expense.....	Miscellaneous expense.....	Miscellaneous expense.....
58,598.46	59,000.00	59,000.00
	<b>3,000,000.00</b>	<b>3,000,000.00</b>
<b>Total of all appropriations for Bureau of Animal Industry..... 4,427,860.00</b>	<b>Total of all appropriations for Bureau of Animal Industry (decrease from 1910 of \$27,400)..... 4,400,460.00</b>	<b>Total amount estimated for Bureau of Animal Industry (an increase over 1911 of \$431,790)..... 4,832,250.00</b>
Total net expenditures to Aug. 31, 1910.....		
4,229,998.16		
Outstanding liabilities on Aug. 31, 1910 (estimated).....		
41,844.57		
Balance to be turned back to Treasury (estimated).....		
156,017.27		

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## BUREAU OF PLANT INDUSTRY.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Bureau of Plant Industry, 1910, \$210,510.</i>			<i>Salaries, Bureau of Plant Industry, 1911, \$255,270.</i>		<i>Salaries, Bureau of Plant Industry, 1912, \$330,320.</i>	
Galloway, B. T.	Chief of bureau, at \$5,000	\$5,000.00	1 plant physiologist and pathologist, who shall be chief of bureau	\$5,000.00	1 plant physiologist and pathologist, who shall be chief of bureau	\$5,000.00
Jones, James E.	Chief clerk, at \$2,250	2,250.00	1 chief clerk	2,250.00	1 chief clerk	2,250.00
Rockwell, J. E.	Editor, at \$2,000	2,000.00	1 editor	2,000.00	1 executive assistant in seed distribution (by transfer from congressional seed distribution)	2,250.00
Butterfield, E. C.	Superintendent of gardens and grounds, at \$1,800	1,800.00	1 superintendent of gardens and grounds	1,800.00	1 superintendent of gardens and grounds	1,800.00
Cox, W. P.	Officer in charge of records, at \$2,000	2,000.00	1 officer in charge of records	2,000.00	1 officer in charge of records	2,000.00
Fealy, Nellie E.	Executive clerk, at \$1,980	1,980.00	3 executive clerks, at \$1,980 each	5,940.00	1 superintendent of seed weighing and mailing (by transfer from congressional seed distribution)	2,000.00
Jones, O. F.	Executive clerk, at \$1,980	1,980.00	1 executive assistant in grain investigations	1,800.00	1 executive clerk (increase of \$120 submitted)	2,100.00
Long, W. W.	Executive clerk, at \$1,980	1,980.00	1 executive assistant in farm management	1,800.00	2 executive clerks, at \$1,980 each (decrease of one as above)	3,960.00
Bradley, E. H.	Clerk, class 4	1,800.00	4 clerks, class 4	7,200.00	1 executive assistant in grain investigations	1,800.00
Callander, W. F.	Clerk, class 4	1,800.00	8 clerks, class 3	12,800.00	1 executive assistant in farm management	1,800.00
Marcy, W. L.	Clerk, class 4	1,800.00	1 clerk	1,500.00	1 executive assistant in pomology (submitted)	1,800.00
Taylor, W. E.	Clerk, class 3	1,600.00	15 clerks, class 2	21,000.00	1 assistant superintendent of seed warehouse (by transfer from congressional seed distribution)	1,400.00
Albee, R. S.	Clerk, class 3	1,600.00	33 clerks, class 1	39,600.00	1 seed inspector (by transfer from congressional seed distribution)	1,000.00
Benner, H. A.	Clerk, class 3	1,600.00	1 seed clerk and superintendent	1,200.00	4 clerks, class 4	7,200.00
Ferrall, John A.	Clerk, class 3	1,600.00	1 clerk	1,080.00	11 clerks, class 3 (increase of 3 submitted, 2 by transfer from lump fund for general expenses, Farmers' Cooperative Demonstration Work, and 1 by transfer from general expenses, Cotton Standardization)	17,600.00
Gochenour, W. P.	Clerk, class 3	1,600.00	2 clerks, at \$1,020 each	2,040.00	1 clerk (increase of 1 by transfer from lump fund for general expenses, administrative and miscellaneous, offset by decrease of 1 by transfer to Division of Accounts and Disbursements)	21,000.00
Huddleson, S. M.	Clerk, class 3	1,600.00	19 clerks, at \$1,000 each	19,000.00	35 clerks, class 1 (increase of 2, 1 by transfer from lump fund for foreign seeds and plants and 1 by changing title of 1 seed clerk and superintendent, \$1,200)	42,000.00
Meloy, F. E.	Clerk, class 3	1,600.00	19 clerks, at \$900 each	17,100.00	NOTE.—1 seed clerk and superintendent, at \$1,200 dropped as above.	
Saunders, B. C.	Clerk, class 3	1,600.00	16 clerks, at \$840 each	13,440.00	1 clerk	1,080.00
Wight, J. C.	Clerk, class 3	1,600.00	1 clerk	800.00	3 clerks, at \$1,020 each (increase of 1 by transfer from congressional seed distribution)	3,060.00
Sillig, O. F.	Clerk, at \$1,500	1,500.00	31 clerks, messengers, or laborers, at \$720 each	22,320.00	22 clerks, at \$1,000 each (increase of 2 by transfer from lump fund for general expenses, crop physiology, 1 from lump fund for general expenses, grain investigations, and 1 from lump fund for general expenses, administrative and miscellaneous, and decrease of 1 by transfer to Division of Accounts and Disbursements, making a net increase of 3 submitted)	22,000.00
Ball, W. A.	Clerk, class 2	1,400.00	16 clerks, messengers, or laborers, at \$660 each	10,560.00	30 clerks, at \$900 each (increase of 11 submitted, 1 by transfer from lump fund for general expenses, cotton standardization; 3 by transfer from lump fund for general expenses, farmers' cooperative demonstration work; 1 by transfer from lump fund for general expenses, pomological investigations; 2 by transfer from lump fund for general expenses, administrative and miscellaneous; and 4 in lieu of 6 clerks, at \$600 each dropped)	27,000.00
Caruthers, R. P.	Clerk, class 2	1,400.00	30 clerks, messengers, or laborers, at \$600 each	18,000.00	18 clerks, at \$840 each (increase of 2 submitted, 1 by transfer from lump fund for general expenses, farmers' cooperative demonstration work, and 1 by transfer from general expenses, south Texas Garden)	15,120.00
Davenport, L. H.	Clerk, class 2	1,400.00	1 gardener	1,200.00	1 clerk	800.00
Grant, Charles V.	Clerk, class 2	1,400.00	1 gardener	1,100.00	38 clerks, messengers, or laborers, at \$720 each (increase of 7 submitted, 2 by transfer from lump	
Kinney, A. H. B.	Clerk, class 2	1,400.00	2 gardeners or assistants, at \$1,000 each	2,000.00		
Lane, K. W.	Clerk, class 2	1,386.39	6 gardeners, at \$900 each	5,400.00		
McClure, Mary M.	Clerk, class 2	1,400.00	2 gardeners, at \$840 each	1,680.00		
Meloy, Guy S.	Clerk, class 2	1,400.00	4 gardeners, at \$780 each	3,120.00		
Oberly, Eunice R.	Clerk, class 2	1,400.00	8 gardeners, at \$720 each	5,760.00		
Passmore, D. G.	Clerk, class 2	1,400.00	3 gardeners, at \$660 each	1,980.00		
Reed, Chas. W.	Clerk, class 2	1,400.00	1 gardener	600.00		
Shepherd, A. C.	Clerk, class 2	1,400.00	1 skilled laborer	900.00		
Sweet, M. L.	Clerk, class 2	1,400.00	3 skilled laborers, at \$840 each	2,520.00		
Adams, C. W.	Clerk, class 1	1,200.00	6 laborers, at \$540 each	3,240.00		
Allen, Jessie M.	Clerk, class 1	1,200.00	19 laborers, messengers, or messenger boys, at \$480 each	9,120.00		
Ashmore, C. D.	Clerk, class 1	1,153.33	3 laborers or charwomen, at \$480 each	1,440.00		
Austin, Ella M.	Clerk, class 1	1,194.99	1 laborer or charwoman	360.00		
Bailey, R. V.	Clerk, class 1	1,200.00	2 laborers, at \$420 each	840.00		
Church, Lillian	Clerk, class 1	1,200.00	6 charwomen, at \$240 each	1,440.00		
Coit, Jemmie L.	Clerk, class 1	1,196.67	4 messenger boys, at \$360 each	1,440.00		
Collier, Wm.	Clerk, class 1	1,200.00	3 messenger boys, at \$300 each	900.00		
Connor, Bernard	Clerk, class 1	350.00				
Dundas, John M.	Clerk, class 1	366.67				
Cramer, Grace M.	Clerk, class 1	1,200.00				
Escavaille, C. L.	Clerk, class 1	400.00				
Quirk, Agnes	Clerk, class 1	100.00				
Zapoleon, Louis B.	Clerk, class 1	600.00				
Gary, Kate F.	Clerk, class 1	1,200.00				
Gordon, Edith F.	Clerk, class 1	1,200.00				
Graham, J. P.	Clerk, class 1	1,198.33				
Herrick, Emma C.	Clerk, class 1	1,200.00				
Hicks, E. E.	Clerk, class 1	1,200.00				
Hugins, F. A.	Clerk, class 1	1,200.00				
McDonnell, E. E.	Clerk, class 1	1,200.00				
McQuinn, H. L.	Clerk, class 1	1,200.00				
MacMorris, Laura	Clerk, class 1	1,200.00				
Moise, Frederic S.	Clerk, class 1	1,200.00				
Morrison, G. W.	Clerk, class 1	1,200.00				
Newton, A. A.	Clerk, class 1	1,200.00				
Parker, S. M.	Clerk, class 1	1,200.00				
Price, Nellie V.	Clerk, class 1	1,150.00				
Quirk, Agnes	Clerk, class 1	100.00				
Smith, L. J.	Clerk, class 1	900.00				
Schutt, Ellen I.	Clerk, class 1	1,200.00				
Taylor, Thos. C.	Clerk, class 1	1,200.00				
Warner, M. F.	Clerk, class 1	1,150.00				
Williams, A. H.	Clerk, class 1	1,200.00				
Woolverton, Pearl	Clerk, class 1	1,200.00				
Estler, Harry S.	Seed clerk and superintendent, at \$1,200	1,200.00				
Dundas, John M.	Clerk, at \$1,080	765.00				
Howell, Edna D.	Clerk, at \$1,000	902.76				
Zapoleon, Louis B.	Clerk, at \$1,000	375.00				
Atwood, Alice C.	Clerk, at \$1,000	611.11				
Bagley, M. H.	Clerk, at \$1,000	1,000.00				
Ball, James S.	Clerk, at \$1,000	83.34				
Carmack, E. D.	Clerk, at \$1,000	322.22				
Baxter, Mary A.	Clerk, at \$1,000	583.33				
Bechtold, Frank E.	Clerk, at \$1,000	625.00				
Carmack, E. D.	Clerk, at \$1,000	83.33				
Field, Frances T.	Clerk, at \$1,000	291.67				
Wallschlaeger, F. O.	Clerk, at \$1,000	1,000.00				
Connor, Bernard	Clerk, at \$1,000	333.34				
Dundas, John M.	Clerk, at \$1,000	666.66				
Vansant, Elsie	Clerk, at \$1,000	288.90				
Corrick, H. K.	Clerk, at \$1,000	708.33				
Creswell, Chas. F.	Clerk, at \$1,000	1,000.00				
Escavaille, C. L.	Clerk, at \$1,000	1,000.00				
Holland, John D.	Clerk, at \$1,000	250.00				
Howell, Edna D.	Clerk, at \$1,000	747.22				
Palmer, W. L.	Clerk, at \$1,000					
Johnston, Gertrude M.	Clerk, at \$1,000					
Martin, Alice R.	Clerk, at \$1,000					
Merick, Lovina S.	Clerk, at \$1,000					
Schneider, Mary M.	Clerk, at \$1,000					

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## Bureau of Plant Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Bureau of Plant Industry, 1910, \$210,510—Continued.</i>			<i>Salaries, Bureau of Plant Industry, 1911, \$256,270—Continued.</i>		<i>Salaries, Bureau of Plant Industry, 1912, \$330,320—Continued.</i>	
Phelps, Nora H.	Clerk, at \$1,000	\$1,000.00				
Rose, L. B.	Clerk, at \$1,000	1,000.00				
Ross, Matilda	Clerk, at \$1,000	1,000.00				
Sawyer, Alice M.	Clerk, at \$1,000	1,000.00				
Zell, Carrie	Clerk, at \$1,000	1,000.00				
Atkinson, Edwin D.	Clerk, at \$900	900.00				
Belt, Artridge	Clerk, at \$900	900.00				
Burke, Edmund	Clerk, at \$900	642.50				
Graham, Grace	Clerk, at \$900	225.00				
Connor, Bernard	Clerk, at \$900	75.00				
Smith, Lucy	Clerk, at \$900	762.50				
Dewdney, Marie V.	Clerk, at \$900	895.00				
Hall, Albert C.	Clerk, at \$900	900.00				
Humphries, Walter R.	Clerk, at \$900	900.00				
Klett, Anna C.	Clerk, at \$900	525.00				
McQueen, Lillian	Clerk, at \$900	102.50				
McDowell, H. P.	Clerk, at \$900	300.00				
Creswell, Chas. F.	Clerk, at \$900	600.00				
Palmer, W. L.	Clerk, at \$900	262.50				
Wulfert, Margaret A.	Clerk, at \$900	637.50				
Prentiss, A. M.	Clerk, at \$900	900.00				
Sliter, E. L.	Clerk, at \$900	900.00				
Snyder, Eva M.	Clerk, at \$900	900.00				
Vansant, Elsie	Clerk, at \$900	632.50				
Wilmeth, John F.	Clerk, at \$900	205.00				
Wallschlaeger, F. O.	Clerk, at \$900	300.00				
Welborn, Ella	Clerk, at \$900	600.00				
Austin David V.	Clerk, at \$840	210.00				
McDowell, H. P.	Clerk, at \$840	560.00				
Ballard, Clara E.	Clerk, at \$840	840.00				
Chandler, H. F.	Clerk, at \$840	595.00				
Wulfert, Margaret A.	Clerk, at \$840	245.00				
Clyne, James V.	Clerk, at \$840	350.00				
Klett, Anna C.	Clerk, at \$840	350.00				
Owen, Abbie	Clerk, at \$840	140.00				
Colne, Harriet	Clerk, at \$840	840.00				
Fenton, Sallie B.	Clerk, at \$840	\$14.33				
Graeff, Peter B.	Clerk, at \$840	840.00				
Graham, Grace	Clerk, at \$840	626.49				
McLaughlin, Susan	Clerk, at \$840	210.00				
Hall, C. L.	Clerk, at \$840	840.00				
Holland, Mary E.	Clerk, at \$840	506.33				
Welborn, Ella	Clerk, at \$840	280.00				
Lewis, Ella	Clerk, at \$840	840.00				
O'Hare, Joseph S.	Clerk, at \$840	630.00				
Russ, Blanche	Clerk, at \$840	700.00				
Shekells, Mabel A.	Clerk, at \$840	70.00				
Smith, Lucy	Clerk, at \$840	70.00				
Smith, Pearle R.	Clerk, at \$840	805.00				
Thomson, Mabel G.	Clerk, at \$840	14.00				
Tyler, Clara H.	Clerk, at \$840	840.00				
Weaver, Elizabeth I.	Clerk, at \$840	840.00				
Hurdle, Ivy V.	Clerk, at \$800	777.77				
Bragdon, C. K.	Clerk, at \$720	720.00				
Brodie, C. E.	Clerk, at \$720	360.00				
Downes, M. A.	Clerk, at \$720	360.00				
Bryan, Ethel V.	Clerk, at \$720	240.00				
Roberts, Harry	Clerk, at \$720	240.00				
Chandler, H. F.	Clerk, at \$720	210.00				
Hurdle, Elizabeth E.	Clerk, at \$720	240.00				
Staves, Marion C.	Clerk, at \$720	270.00				
Clyne, James V.	Clerk, at \$720	288.00				
Owen, Abbie	Clerk, at \$720	180.00				
Ramsay, Robert E.	Clerk, at \$720	100.00				
Schapira, Joseph	Clerk, at \$720	120.00				
Hardenstein, F. P.	Clerk, at \$720	716.00				
Harrison, Bessie K.	Clerk, at \$720	690.00				
Smith, Pearle R.	Clerk, at \$720	30.00				
Lower, Elsie E.	Clerk, at \$720	180.00				
Lynch, John T.	Clerk, at \$720	50.00				
McLaughlin, Susan	Clerk, at \$720	180.00				
Velhmeier, Frank J.	Clerk, at \$720	300.00				
Millott, Eugene	Clerk, at \$720	720.00				
Muhleman, B. M.	Clerk, at \$720	720.00				
Palmer, Jessamine L.	Clerk, at \$720	300.00				
Townsend, Karl H.	Clerk, at \$720	120.00				
Peacock, Eva M.	Clerk, at \$720	720.00				
Rand, Clara C.	Clerk, at \$720	720.00				
Campbell, Susan T.	Clerk, at \$660	165.00				
Lower, Elsie E.	Clerk, at \$660	495.00				
Evans, Lulu M.	Clerk, at \$660	110.00				
Harrison, Bessie K.	Clerk, at \$660	27.50				
Owen, Abbie	Clerk, at \$660	357.50				
Townsend, Karl H.	Clerk, at \$660	165.00				
Hurdle, Elizabeth E.	Clerk, at \$660	247.50				
Jones, Robert	Clerk or laborer, at \$660	220.00				
Staves, Marion C.	Clerk or laborer, at \$660	110.00				
Velhmeier, Frank J.	Clerk or laborer, at \$660	55.00				
Cookman, G. E.	Laborer, at \$660	656.33				
Cutshall, G. W.	Laborer, at \$660	660.00				
Jones, Thos. B., jr.	Laborer, at \$660	660.00				
Minor, G. O.	Laborer, at \$660	660.00				
Sullivan, W.	Laborer, at \$660	660.00				
Barber, E. E.	Clerk, at \$600	600.00				
					fund for general expenses, grain standardization, 3 by transfer from lump fund for foreign seeds and plants, and 2 by transfer from lump fund for congressional seed distribution)	\$27,360.00
					16 clerks, messengers, or laborers, at \$660 each	10,560.00
					26 clerks, messengers, or laborers, at \$600 each (decrease of 6 submitted, they having been changed to 4 clerks, at \$900 each, as above, and increase of 2 submitted by transfer from lump fund for congressional seed distribution, making a net decrease of 4)	15,600.00
					1 artist (by transfer from lump fund for general expenses, pathological laboratory)	1,620.00
					1 photographer (by transfer from lump fund for general expenses, farm management)	1,140.00
					1 photographer (by transfer from congressional seed distribution)	1,080.00
					1 laboratory aid (by transfer from lump fund for general expenses, pathological laboratory)	1,440.00
					1 laboratory aid (by transfer from lump fund for general expenses, bacteriology and nutrition)	1,380.00
					3 laboratory aids, at \$1,200 each (1 by transfer from lump fund for general expenses, bacteriology and nutrition; 1 from lump fund for general expenses, special seeds and plants, and 1 from lump fund for congressional seed distribution)	3,600.00
					5 laboratory aids, at \$840 each (2 by transfer from lump fund for general expenses, seed-testing laboratories; 1 by transfer from lump fund for general expenses, forest pathology; 1 by transfer from lump fund for general expenses, crop technology; and 1 by transfer from lump fund for general expenses, paper-plant investigations)	4,200.00
					4 laboratory aids, at \$720 each (1 by transfer from lump fund for general expenses, pathological laboratory; 1 by transfer from lump fund for general expenses, crop technology; 1 by transfer from lump fund for general expenses, sugar-plant investigations; and 1 by transfer from lump fund for general expenses, taxonomic and range investigations)	2,880.00
					3 laboratory aids, at \$600 each (1 by transfer from lump fund for general expenses, crop technology; 1 by transfer from lump fund for general expenses, cotton standardization; and 1 by transfer from lump fund for general expenses, paper plant investigations)	1,800.00
					1 gardener (by transfer from lump fund for general expenses, special seeds and plants)	1,440.00
					2 gardeners, at \$1,200 each (increase of 1 submitted by transfer from congressional seed distribution)	2,400.00
					1 gardener	1,100.00
					2 gardeners, or assistants, at \$1,000 each	2,000.00
					7 gardeners, at \$900 each (increase of 1 submitted by transfer from lump fund for general expenses, special seeds and plants)	6,300.00
					4 gardeners, at \$840 each (increase of 2 submitted, 1 by transfer from lump fund for general expenses, western agricultural extension, and 1 by transfer from lump fund for general expenses, experimental gardens and grounds)	3,360.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
Salaries, Bureau of Plant Industry, 1910, \$210,510—Continued.			Salaries, Bureau of Plant Industry, 1911, \$255,270—Continued.		Salaries, Bureau of Plant Industry, 1912, \$330,320—Continued.	
Evans, Lulu M.		\$345.00			4 gardeners, at \$780 each.	\$3,120.00
Selecman, C. M. R.	Clerk, at \$600.	150.00			8 gardeners, at \$720 each.	5,760.00
Stritzinger, F. J.		70.00			5 gardeners, at \$660 each (increase of 2 submitted by transfer from lump fund for general expenses, Arlington farm and horticulture).	3,300.00
Haines, Hazel.	Clerk, at \$600.	523.33			1 gardener.	720.00
Owen, Abbie.		25.00			1 skilled laborer.	960.00
Skippon, C. D.	Clerk, at \$600.	101.67			4 skilled laborers, at \$840 each (increase of 1 by transfer from lump fund for general expenses, experimental gardens and grounds).	3,336.00
Todd, Blanche.		350.00			1 mechanician (by transfer from lump fund for general expenses, physical investigations).	1,380.00
Clyne, James V.	Clerk or messenger, at \$600.	10.00			1 mechanician (by transfer from lump fund for general expenses, crop technology).	1,260.00
Mann, Howard Q.		400.00			1 mechanical assistant (by transfer from lump fund for general expenses, pomological investigations).	1,200.00
Frazier, Frankie.		250.00			1 mechanician (by transfer from lump fund for general expenses, Arlington farm and horticulture).	900.00
Pierce, J. F.	Clerk or messenger, at \$600.	175.00			1 carpenter (by transfer from lump fund for general expenses, Arlington farm and horticulture).	900.00
Townsend, Karl H.		175.00			1 painter (by transfer from lump fund for general expenses, Arlington farm and horticulture).	720.00
Winkler, J. H.	Messenger, at \$300.	600.00			1 teamster (by transfer from congressional seed distribution).	600.00
Davis, Hugh M.	Laborer, at \$600.	600.00			15 laborers, at \$540 each (increase of 9 submitted, 1 by transfer from lump fund for general expenses, drug and other plants; 1 by transfer from lump fund for general expenses, pomological investigations; 3 by transfer from lump fund for general expenses, Arlington farm and horticulture; and 4 by transfer from lump fund for congressional seed distribution).	8,100.00
Edelen, Eoline K.	Laborer, at \$600.	600.00			21 laborers, messengers, or messenger boys, at \$480 each (increase of 2 submitted, 1 by transfer from lump fund for general expenses, western agricultural extension; and 1 by transfer from lump fund for general expenses, Arlington farm and horticulture).	10,080.00
Franklin, C. D.	Laborer, at \$600.	600.00			5 laborers or charwomen, at \$480 each (increase of 2 submitted, 1 by transfer from lump fund for general expenses, crop technology; and 1 from general expenses, cotton standardization).	2,400.00
Hammersley, J. J.	Laborer, at \$600.	463.33			2 laborers or charwomen, at \$360 each (increase of 1 by transfer from lump fund for general expenses, administrative and miscellaneous).	720.00
Miller, Walter L.		100.00			2 laborers, at \$420 each.	840.00
Massie, Mattie L.	Laborer, at \$600.	600.00			7 charwomen, at \$240 each (increase of 1 submitted by transfer from lump fund for general expenses, pomological investigations).	1,680.00
Lee, Frank.	Laborer, at \$600.	600.00			7 messenger boys, at \$360 each (increase of 3 submitted, 1 by transfer from lump fund for general expenses, crop technology; 1 by transfer from lump fund for general expenses, alkali and drought resistant plants; and 1 by transfer from lump fund for general expenses, farmers' cooperative demonstration work).	2,520.00
Sholl, Alpheus.	Laborer, at \$600.	555.00				
Trotter, Stance J.	Laborer, at \$600.	600.00				
Dulin, Mary S.	Assistant photographer, at \$600.	600.00				
Walter, R. B.	Carpenter, at \$900.	900.00				
Smith, W. A.	Carpenter, at \$840.	840.00				
Bisset, David.	Gardener, at \$1,000.	1,000.00				
Gauges, Joseph A.	Gardener, at \$1,000.	597.22				
Keller, Charles.		402.78				
Bullen, Harry.	Gardener, at \$900.	900.00				
Byrnes, J. Wise.	Gardener, at \$900.	900.00				
Dawson, John P.	Gardener, at \$900.	900.00				
Graner, Mike.	Gardener, at \$900.	362.50				
Keller, Charles.		537.50				
Haase, Henry F.	Gardener, at \$900.	750.00				
Quinn, James.		150.00				
Klopfer, Henry.	Gardener, at \$900.	900.00				
Ecton, Thomas G.	Gardener, at \$840.	840.00				
Haase, Henry F.	Gardener, at \$840.	140.00				
Jolliff, Jesse O.		700.00				
Boyle, Henry H.	Gardener, at \$780.	780.00				
Evans, W. D.	Gardener, at \$780.	292.50				
Graner, Mike.		335.83				
Jolliff, Jesse O.		130.00				
Hauser, Ernest.	Gardener, at \$780.	780.00				
Olden, John W.	Gardener, at \$780.	780.00				
Evans, W. D.		330.00				
Graner, Mike.	Gardener, at \$720.	120.00				
Paget, Wilmer J.		270.00				
Fraille, M.	Gardener, at \$720.	720.00				
Haws, Henry.	Gardener, at \$720.	712.00				
Hull, Wm. S.	Gardener, at \$720.	720.00				
Kletsch, Ernest.	Gardener, at \$720.	600.00				
May, Eugene, jr.		120.00				
Evans, W. D.		110.00				
Garrison, James W.	Gardener, at \$660.	110.00				
May, Eugene, jr.		440.00				
Lucas, W. R.	Gardener, at \$660.	660.00				
Paget, Wilmer J.	Gardener, at \$660.	412.50				
Smith, Edward F.		247.50				
Carbery, James L.		73.33				
Garrison, James W.	Gardener, at \$600.	85.00				
May, Eugene, jr.		100.00				
Smith, Edward F.		260.00				
Maxwell, G. R.	Skilled laborer, at \$900.	900.00				
Buckley, Margaret.	Skilled laborer, at \$840.	840.00				
Orton, W. S., sr.	Painter, at \$840.	840.00				
Butler, John L.		296.33				
Leapley, Harry T.	Plumber, at \$840.	21.00				
Woodward, Charles R.		403.67				
Schubert, Charles J.	Plumber, at \$840.	840.00				
Bryant, R. A.	Skilled laborer, at \$720.	720.00				
Duffy, Sadie.	Skilled laborer, at \$720.	720.00				
Frazier, C. T.	Skilled laborer, at \$720.	702.00				
Kelly, J. W.	Skilled laborer, at \$720.	720.00				
Page, J. E.	Skilled laborer, at \$720.	720.00				
Schultheis, W. H.	Skilled laborer, at \$720.	720.00				
Smith, Mary J.	Skilled laborer, at \$720.	720.00				
Willis, W. E.	Skilled laborer, at \$720.	720.00				
Allen, Tibbett.	Skilled laborer, at \$540.	447.00				
Hardy, Iverson T.		67.50				
Brodie, C. E.		270.00				
Frost, Fred C.	Skilled laborer, at \$540.	90.00				
Miller, Walter L.		157.50				
Clinkett, Isaac.	Skilled laborer, at \$540.	540.00				
Gordon, John C.	Skilled laborer, at \$540.	540.00				
Dickerson, Ernest O.	Messenger, at \$480.	480.00				
Etheridge, J. W.	Messenger, at \$480.	480.00				

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Bureau of Plant Industry, 1910, \$210,510—Continued.</i>			<i>Salaries, Bureau of Plant Industry, 1911, \$255,270—Continued.</i>		<i>Salaries, Bureau of Plant Industry, 1912, \$330,320—Continued.</i>	
Langford, James B.....	Messenger, at \$480.....	\$480.00			4 messenger boys, at \$300 each (increase of 1 submitted by transfer from lump fund for general expenses, cotton standardization).....	\$1,200.00
Lingle, Albert F.....	Messenger, at \$480.....	480.00				
Thompson, Elmer.....	Messenger, at \$480.....	480.00				
Connors, John J.....	Messenger or messenger boy, at \$480.....	220.00				
Miller, Walter L.....	Messenger or messenger boy, at \$480.....	260.00				
Davis, R. Nelson.....	Messenger or messenger boy, at \$480.....	280.00				
Roby, John H.....	Messenger or messenger boy, at \$480.....	200.00				
Flaherty, Emery R.....	Messenger or messenger boy, at \$480.....	230.67				
Lynch, Lewis M.....	Messenger or messenger boy, at \$480.....	249.33				
Frost, Fred C.....	Messenger or messenger boy, at \$480.....	400.00				
Weisbrod, Harry N.....	Messenger or messenger boy, at \$480.....	158.67				
Mann, Howard Q.....	Messenger or messenger boy, at \$480.....	300.00				
Stouffer, Albert F.....	Messenger or messenger boy, at \$480.....	280.00				
Sando, William J.....	Messenger or messenger boy, at \$480.....	133.33				
Townsend, Karl H.....	Messenger or messenger boy, at \$480.....	124.00				
Stely, Daniel H.....	Messenger or messenger boy, at \$480.....	320.00				
Turner, Olan E.....	Messenger or messenger boy, at \$480.....	280.00				
Stevenson, Perry J.....	Messenger or messenger boy, at \$480.....	133.33				
Whitlock, Harry T.....	Messenger boy, at \$480.....	420.00				
Mehlfelt, Archie W.....	Messenger boy, at \$480.....	40.00				
Murphy, R. O. D.....	Messenger boy, at \$360.....	150.00				
Clark, John H.....	Messenger boy, at \$360.....	60.00				
Roby, John H.....	Messenger boy, at \$360.....	150.00				
Sando, William J.....	Messenger boy, at \$360.....	150.00				
Connors, John J.....	Messenger boy, at \$360.....	30.00				
Fetzer, Harvey A.....	Messenger boy, at \$360.....	45.00				
Mehlfelt, Archie W.....	Messenger boy, at \$360.....	135.00				
Weisbrod, Harry N.....	Messenger boy, at \$360.....	37.00				
Flaherty, Emery R.....	Messenger boy, at \$360.....	93.00				
Fuller, Walter.....	Messenger boy, at \$360.....	15.00				
Murphy, R. O. D.....	Messenger boy, at \$360.....	80.00				
Stely, Daniel H.....	Messenger boy, at \$360.....	135.00				
Stevenson, Perry J.....	Messenger boy, at \$360.....	360.00				
Lynch, John H.....	Messenger boy, at \$360.....	50.00				
Clark, John H.....	Messenger boy, at \$360.....	81.67				
Fetzer, Harvey A.....	Messenger boy, at \$360.....	124.17				
Roby, John H.....	Messenger boy, at \$360.....	21.67				
Wells, Howard L.....	Messenger boy, at \$360.....	37.50				
Connors, John J.....	Messenger boy, at \$360.....	81.67				
Flaherty, Emery R.....	Messenger boy, at \$360.....	57.50				
McCarthy, A. P.....	Messenger boy, at \$360.....	30.83				
Stely, Daniel H.....	Messenger boy, at \$360.....	10.00				
Lewis, C. I. M.....	Messenger boy, at \$360.....	75.00				
Snyder, Melvin J.....	Messenger boy, at \$360.....	61.67				
Thomas, Millard L.....	Messenger boy, at \$360.....	69.17				
Weisbrod, Harry N.....						
Total.....		206,807.51				
Unexpended balance.....		3,702.49				
Total amount of above appropriation.....		210,510.00				
					<p>NOTE.—There is an increase in the above appropriation of \$75,050; \$75,530 covers the transfer of 86 employees from the lump-fund appropriations, which appropriations have been reduced accordingly. One new place at \$1,800 is recommended, also a promotion of \$120 in salary of 1 executive clerk. One clerk, class 1, has been added in lieu of 1 seed clerk and superintendent at the same salary, and 4 clerks, at \$900 each, have been added in lieu of 6 clerks, messengers, or laborers, at \$600 each. One clerk, class 2, and 1 clerk, at \$1,000, have been transferred to Division of Accounts and Disbursements. The changes in detail are as follows:</p> <p>Transfers from lump fund for general expenses:</p> <p>3 employees from pathological laboratory..... 3,780.00</p> <p>1 employee from forest pathology..... 840.00</p> <p>2 employees from crop physiology..... 2,000.00</p> <p>2 employees from bacteriology and nutrition..... 2,580.00</p> <p>1 employee from drug and other plants..... 540.00</p> <p>6 employees from crop technology..... 4,260.00</p> <p>5 employees from cotton standardization..... 3,880.00</p> <p>2 employees from grain standardization..... 1,440.00</p> <p>1 employee from physical investigations..... 1,380.00</p> <p>3 employees from special seeds and plants..... 3,540.00</p> <p>2 employees from seed testing laboratories..... 1,680.00</p> <p>1 employee from grain investigations..... 1,000.00</p> <p>2 employees from paper plant investigations..... 1,440.00</p> <p>1 employee from alkali and drought resistant plants... 360.00</p> <p>1 employee from sugar plant investigations..... 720.00</p> <p>1 employee from taxonomic and range investigations... 720.00</p> <p>1 employee from farm management..... 1,140.00</p> <p>7 employees from farmers' cooperative demonstration work..... 7,100.00</p> <p>2 employees from western agricultural extension..... 1,320.00</p> <p>4 employees from pomological investigations..... 2,880.00</p> <p>2 employees from experimental gardens and grounds..... 1,680.00</p> <p>9 employees from Arlington farm and horticulture..... 5,940.00</p> <p>1 employee from south Texas garden..... 840.00</p> <p>5 employees from administrative and miscellaneous.... 4,560.00</p> <p>Transfers from purchase and distribution of valuable seeds:</p> <p>17 employees from congressional seed distribution... 16,550.00</p> <p>4 employees from foreign seed and plant introduction.... 3,360.00</p> <p>Promotions:</p> <p>1 executive clerk..... 120.00</p>	

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## Bureau of Plant Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Plant Industry, 1910, \$210,510—Continued.</i>	<i>Salaries, Bureau of Plant Industry, 1911, \$255,270—Continued.</i>	<i>Salaries, Bureau of Plant Industry, 1912, \$330,320—Continued.</i>
		New places: 1 executive assistant..... \$1,800.00 1 clerk, class 1..... 1,200.00 4 clerks, at \$900 each..... 3,600.00 82,250.00 Places dropped: 1 seed clerk and superintendent..... 1,200.00 6 clerks, messengers, or laborers, at \$600 each..... 3,600.00 Transfers to Division of Accounts and Disbursements: 1 clerk, class 2..... 1,400.00 1 clerk..... 1,000.00 7,200.00 75,050.00
<i>General expenses, Bureau of Plant Industry, 1910, \$1,180,796.</i>	<i>General expenses, Bureau of Plant Industry, 1911, \$1,193,346.</i>	<i>General expenses, Bureau of Plant Industry, 1912, \$1,347,326.</i>
Salaries: In Washington..... \$393,415.31 Out of Washington..... 348,457.93 Stationery..... 13,781.91 Miscellaneous supplies, equipment, etc..... 116,753.41 Furniture..... 14,639.16 Fuel..... 1,162.36 Freight..... 1,163.62 Express..... 2,220.93 Telegraph..... 811.22 Telephone..... 1,028.06 Rent..... 5,185.66 Gas and electricity..... 2,019.52 Apparatus, instruments, and laboratory material..... 24,599.31 Travel and station and field expenses..... 167,522.68 Total expenditures to Aug. 31, 1910..... 1,092,761.08 Less repayments to credit of appropriation..... 85.33 Net expenditures to Aug. 31, 1910..... 1,092,675.75 Outstanding liabilities on Aug. 31, 1910..... 28,597.87 Total expenditures and liabilities..... 1,121,273.62 Balance to be turned back into Treasury (estimated)..... 42,155.91 Expended during fiscal year 1909 from immediately available fund..... 17,366.47 Total amount of above appropriation..... 1,180,796.00	Salaries: In Washington..... \$408,422.33 Out of Washington..... 411,477.73 Stationery..... 13,945.00 Miscellaneous supplies, equipment, etc..... 106,134.00 Furniture..... 15,260.00 Fuel..... 635.00 Freight..... 1,195.00 Express..... 2,575.00 Telegraph..... 1,015.50 Telephone..... 1,132.50 Rent..... 4,920.00 Gas and electricity..... 1,790.00 Apparatus, instruments, and laboratory material..... 32,413.77 Travel and station and field expenses..... 192,430.17 Total amount of above appropriation (an increase over 1910 of \$12,550).... 1,193,346.00	Salaries: In Washington..... \$445,757.00 Out of Washington..... 455,000.00 Stationery..... 16,500.00 Miscellaneous supplies, equipment, etc..... 115,000.00 Furniture..... 17,010.00 Fuel..... 4,755.00 Freight..... 3,000.00 Express..... 7,040.00 Telegraph..... 1,400.00 Telephone..... 1,571.00 Rent..... 11,949.00 Gas and electricity..... 2,038.00 Apparatus, instruments, and laboratory material..... 40,000.00 Travel and station and field expenses..... 226,306.00 Total amount estimated (an increase over 1911 of \$153,980)..... 1,347,326.00 NOTE.—The actual increase estimated is \$209,600, but salaries amounting to \$55,620 have been transferred to the statutory roll.
<i>Purchase and distribution of valuable seeds, 1910, \$317,960.</i>	<i>Purchase and distribution of valuable seeds, 1911, \$309,590.</i>	<i>Purchase and distribution of valuable seeds, 1912, \$301,680.</i>
Salaries: In Washington..... \$46,294.26 Out of Washington..... 14,914.91 Stationery..... 1,553.72 Miscellaneous supplies, equipment, etc..... 219,063.86 Furniture..... 430.42 Fuel..... 625.25 Freight..... 3,659.48 Express..... 796.13 Telegraph..... 201.54 Telephone..... 226.41 Rent..... 4,800.00 Gas and electricity..... 115.55 Apparatus, instruments, and laboratory material..... 1,633.46 Travel and station and field expenses..... 13,799.27 Total expenditures on August 31, 1910..... 308,114.26 Outstanding liabilities on August 31, 1910..... 8,065.29 Total expenditures and liabilities..... 316,179.55 Balance to be turned back into Treasury..... 1,780.45 Total amount of above appropriation..... 317,960.00	Salaries: In Washington..... \$54,850.00 Out of Washington..... 16,200.00 Stationery..... 1,465.00 Miscellaneous supplies, equipment, etc..... 208,955.00 Furniture..... 450.00 Fuel..... 625.00 Freight..... 5,000.00 Express..... 875.00 Telegraph..... 175.00 Telephone..... 220.00 Rent..... 5,120.00 Gas and electricity..... 125.00 Apparatus, instruments, and laboratory material..... 750.00 Travel and station and field expenses..... 14,780.00 Total amount of above appropriation (a decrease from 1910 of \$8,370).... 309,590.00	Salaries: In Washington..... \$21,590.00 Out of Washington..... 14,155.00 Stationery..... 1,745.00 Miscellaneous supplies, equipment, etc..... 234,840.00 Furniture..... 450.00 Fuel..... 625.00 Freight..... 5,100.00 Express..... 900.00 Telegraph..... 200.00 Telephone..... 220.00 Rent..... 5,120.00 Gas and electricity..... 125.00 Apparatus, instruments, and laboratory material..... 1,000.00 Travel and station and field expenses..... 15,610.00 Total amount estimated (a decrease from 1911 of \$7,910)..... 301,680.00 NOTE.—The apparent decrease is due to the transfer to the statutory roll of salaries amounting to \$19,910. There is an actual estimated increase of \$12,000 under the seed fund.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Paper tests (\$10,000), balance available July 1, 1909, \$2,527.48.</i>	<i>Purchase and distribution of valuable seeds, 1911, \$303,590—Continued.</i>	<i>Purchase and distribution of valuable seeds, 1912, \$301,680—Continued.</i>
Salaries, out of Washington..... \$85.01		
Stationery..... 12.07		
Miscellaneous supplies, equipment, etc..... 1,269.69		
Furniture..... 1.75		
Freight..... 5.36		
Express..... 7.15		
Telegraph..... 1.36		
Apparatus, instruments, and laboratory material..... 1,119.22		
Total expenditures to Aug. 31, 1910..... 2,501.61		
Balance to be turned back into Treasury (estimated)..... 25.87		
Total amount of above fund..... 2,527.48		
<i>Paper tests, 1910 (\$10,000), amount allotted to the Bureau of Plant Industry, \$439.25.</i>		
Salaries, in Washington..... \$332.50		
Salaries, out of Washington..... 106.75		
Total amount of above fund..... 439.25		

OFFICES, LABORATORIES, AND PROJECTS.

OFFICES OF ADMINISTRATION.	OFFICES OF ADMINISTRATION.	OFFICES OF ADMINISTRATION.
(Beverly T. Galloway, chief of bureau; Albert F. Woods and G. Harold Powell, assistant chiefs of bureau.)	(Beverly T. Galloway, chief of bureau; G. Harold Powell, assistant and acting chief of bureau; William A. Taylor, acting assistant chief of bureau.)	(Beverly T. Galloway, chief of bureau; William A. Taylor, assistant chief of bureau.)
Salaries, statutory..... \$64,915.50	Salaries, statutory..... \$71,070.00	Salaries, statutory..... \$72,090.00
Salaries, lump fund..... 24,800.24	Salaries, lump fund..... 17,147.75	Salaries, lump fund..... 13,847.75
Miscellaneous expenses and supplies..... 11,981.56	Miscellaneous expenses and supplies..... 17,837.00	Miscellaneous expenses and supplies..... 17,837.00
Traveling and field expenses..... 939.62	Traveling and field expenses..... 1,500.00	Traveling and field expenses..... 1,500.00
Total expenditures..... 102,636.92	Total..... 107,554.75	Total..... 105,274.75
Outstanding liabilities..... 1,001.85		
Total expenditures and liabilities..... 103,638.77		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Office of the chief of bureau..... <sup>1</sup> 41,931.20	(1) Office of the chief of bureau... <sup>2</sup> 37,387.00	(1) Office of the chief of bureau.. <sup>2</sup> 37,387.00
This project includes the correspondence and general administrative work of the office, including appointments and other changes in the grade of the personnel; the preparation of pay rolls; the various other necessary details connected with the administration of the work of the bureau. The compilation of reports for congressional and other use is also included under this project.		
(2) Office of assistant chief of bureau..... <sup>8</sup> 18,477.69	(2) Office of assistant chief of bureau..... <sup>4</sup> 22,860.00	(2) Office of assistant chief of bureau..... <sup>8</sup> 22,860.00
This project includes the correspondence and general administrative work conducted by the assistant chief of bureau, including the planning and recording of projects, cooperative agreements with stations, etc., filing and indexing of the correspondence of the bureau, and various other necessary details connected with the work falling under the immediate direction of the assistant chief of bureau.		
(3) Office of records (auditing and accounting)..... <sup>6</sup> 17,007.59	(3) Office of records (auditing and accounting)..... <sup>7</sup> 17,350.00	(3) Office of records (auditing and accounting)..... <sup>8</sup> 14,950.00
This project includes all of the financial operations of the bureau, such as the keeping of accounts, the auditing of vouchers for traveling and other expenses, the recording of contracts and leases, letters of authorization for travel, etc. The manifolding of circular letters for all of the offices of the bureau is also included under this project.		Decrease of \$2,400 by transfer of two statutory positions to Division of Accounts and Disbursements.
(4) Office of supplies and property..... <sup>9</sup> 9,381.75	(4) Office of supplies and property. <sup>10</sup> 9,460.00	(4) Office of supplies and property..... <sup>10</sup> 9,460.00
This project includes all work connected with the purchase, delivery, and recording of all supplies and property of the bureau; the drawing of requisitions; the preparation of inventories, etc. All laboratory and field equipment and miscellaneous supplies of the bureau are secured through this office.		
(5) Editorial office..... <sup>11</sup> 5,170.83	(5) Editorial office..... <sup>12</sup> 7,880.00	(5) Editorial office..... <sup>13</sup> 7,880.00
This project includes the preparation of manuscript for the printer, the proof-reading of publications, the preparation of indexes, and various other necessary details connected with the issuance and distribution of the publications of the bureau. All of this work is carried on in cooperation with the Division of Publications of the department.		

<sup>1</sup> Includes statutory salaries amounting to \$19,976.34.  
<sup>2</sup> Includes statutory salaries amounting to \$18,090.  
<sup>3</sup> Includes statutory salaries amounting to \$10,325.17.  
<sup>4</sup> Includes statutory salaries amounting to \$13,660.  
<sup>5</sup> Includes statutory salaries amounting to \$14,560.  
<sup>6</sup> Includes statutory salaries amounting to \$14,657.50.  
<sup>7</sup> Includes statutory salaries amounting to \$16,810.

<sup>8</sup> Includes statutory salaries amounting to \$14,410.  
<sup>9</sup> Includes statutory salaries amounting to \$5,446.66.  
<sup>10</sup> Includes statutory salaries amounting to \$6,960.  
<sup>11</sup> Includes statutory salaries amounting to \$5,020.83.  
<sup>12</sup> Includes statutory salaries amounting to \$6,480.  
<sup>13</sup> Includes statutory salaries amounting to \$7,880.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
OFFICES OF ADMINISTRATION—Continued.	OFFICES OF ADMINISTRATION—Continued.	OFFICES OF ADMINISTRATION—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(6) Library, translating and abstracting work..... <sup>1</sup> \$4,345.55 This project includes the maintenance of a branch library of pathological, physiological, and other plant literature, as an aid to the investigators of the bureau; also the translating and abstracting of such literature, the keeping of catalogues, etc. All of this work is carried on in cooperation with the library of the department.	(6) Library, translating and abstracting work..... <sup>2</sup> \$4,760.00	(6) Library, translating and abstracting work..... <sup>2</sup> \$4,760.00
(7) Correspondence and accounting, congressional seed distribution..... <sup>3</sup> 7,324.16	(7) Correspondence and accounting, congressional seed distribution..... <sup>4</sup> 7,857.75	(7) Correspondence and accounting, congressional seed distribution..... <sup>5</sup> 7,977.75
This project includes the carrying on of correspondence relating to the congressional distribution of seeds and plants, the keeping of accounts of the allotments to each Congressman, the accounting of addressed franks, and other necessary details connected with the distribution which are handled in the administrative offices of the bureau.		The estimated increase of \$120 is desired for the purpose of increasing the salary of one executive assistant on the statutory roll.
LABORATORY OF PLANT PATHOLOGY.	LABORATORY OF PLANT PATHOLOGY.	LABORATORY OF PLANT PATHOLOGY.
(Erwin F. Smith, pathologist in charge.)	(Erwin F. Smith, pathologist in charge.)	(Erwin F. Smith, pathologist in charge.)
Salaries, statutory.....\$2,229.99	Salaries, statutory.....\$3,360.00	Salaries, statutory.....\$7,140.00
Salaries, lump fund.....15,258.00	Salaries, lump fund.....15,680.00	Salaries, lump fund.....12,120.00
Miscellaneous expenses and supplies.....1,952.86	Miscellaneous expenses and supplies.....600.00	Miscellaneous expenses and supplies.....4,160.00
Traveling and field expenses.....280.38	Traveling and field expenses.....280.00	Traveling and field expenses.....500.00
Total expenditures.....19,721.23	Total.....19,920.00	Total.....23,920.00
Outstanding liabilities.....472.19		
Total expenditures and liabilities.....20,193.42		
PROJECT.	PROJECT.	PROJECT.
(1) Laboratory of plant pathology.....20,193.42	(1) Laboratory of plant pathology.....19,920.00	(1) Laboratory of plant pathology.....23,920.00
This is the working laboratory for many of the pathological investigations of the Bureau of Plant Industry. The work on bacterial diseases includes those of the sugar cane, coconut, cotton, corn, potato, tomato, cucumber, bean, squash, cabbage, tobacco, olive, peach, carnation, larkspur, chrysanthemum, gladiolus, begonia, geranium, Japanese and common plum, pear, muskmelon, ginseng, mulberry, all crown galls, diseases of bulbs, the onion, etc., and other bacterial diseases as opportunity offers. Diseases material is received from all parts of the United States for examination and advice as to methods of treatment.		The estimated increase of \$4,000 is desired to provide for additional laboratory researches and facilities, and especially to undertake a thorough study of the fungi and bacteria on corn spoiled in transit and in elevators.
<i>Results.</i> —Work has been prosecuted on a disease of great economic importance destroying tomatoes. It appeared in the vicinity of Grand Rapids, Mich., and in a single year in the fields of a single company caused a loss of \$10,000. The cause has been ascertained and experiments are under way, in cooperation with another office of the bureau, to determine how infections take place and to provide remedies if possible.		
Experiments on the olive-tubercle disease have shown why former pruning for removal of the disease was not effective and how it can be made effective, namely, by cutting far enough below the visible knots to include the invisible downward movement of the disease.		
Experiments have been completed on the coconut bud-rot and a bulletin has been prepared for publication. Some work has been undertaken on moldy corn, as available funds have permitted.		
Preliminary investigations of the crown gall of plants have resulted in the preparation of a bulletin which is now ready for publication. Further experiments are under way, as the importance of the subject warrants a thorough investigation.		
A great deal of work has been done on the rotting of potatoes, and a number of facts of practical importance have been discovered. A destructive tumor disease of limes and other citrus fruits has been investigated and a method of control devised. A very destructive disease of the banana in Central America, from Panama northward, is also under investigation, with promise of valuable results.		

<sup>1</sup> Includes statutory salaries amounting to \$3,094.<sup>2</sup> Includes statutory salaries amounting to \$3,260.<sup>3</sup> Includes statutory salaries amounting to \$6,395.<sup>4</sup> Includes statutory salaries amounting to \$6,810.<sup>5</sup> Includes statutory salaries amounting to \$6,930.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS.—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>PATHOLOGICAL COLLECTIONS AND INSPECTION WORK.</b>	<b>PATHOLOGICAL COLLECTIONS AND INSPECTION WORK.</b>	<b>PATHOLOGICAL COLLECTIONS AND INSPECTION WORK.</b>
(Flora W. Patterson, mycologist in charge.)	(Flora W. Patterson, mycologist in charge.)	(Flora W. Patterson, mycologist in charge.)
Salaries, statutory..... \$1,555.00	Salaries, statutory..... \$1,080.00	Salaries, statutory..... \$1,080.00
Salaries, lump-fund..... 2,415.00	Salaries, lump-fund..... 4,220.00	Salaries, lump-fund..... 5,340.00
Miscellaneous expenses and supplies..... 1,962.12	Miscellaneous expenses and supplies..... 930.00	Miscellaneous expenses and supplies..... 810.00
Total..... 5,932.12	Total..... 6,230.00	Total..... 7,230.00
<b>PROJECT.</b>	<b>PROJECT.</b>	<b>PROJECT.</b>
(1) Pathological collections and inspection work..... 5,932.12	(1) Pathological collections and inspection work..... 6,230.00	(1) Pathological collections and inspection work..... 7,230.00
<p>The pathological collections are maintained for the benefit of all of the pathological investigators of the Bureau of Plant Industry. The importance of maintaining as complete a collection of pathogenic and related species as possible as an aid to the pathological workers of the bureau will be obvious. This project also includes the maintenance of mycological and host indexes of new species; the conducting of a mycological exchange with experiment-station workers and others; the identification of pathological material received from correspondents or referred for critical identification by the pathologists of the bureau; and the carrying on of a rigid inspection of plants in the department collections, or those received and distributed in connection with plant-introduction work, in order to guard against the introduction or spread of new or serious fungous diseases.</p> <p><i>Results.</i>—The pathological collections are all now arranged in new steel cases and conveniently available for consultation by all of the pathological workers. The specimens are of a highly important economic nature, and provide a means of giving practical information to the farmer, as well as furnishing a basis for critical scientific work which has as its objects a practical application.</p> <p>The information contained in the mycological and host indexes of new species has been of great importance in the work of foreign seed and plant introduction. Data concerning plant diseases occurring in foreign countries from which importations of plants are made are furnished by these indexes and immediate measures can be advised for protection against possible importations of new diseases.</p> <p>As a result of the pathological inspection work, the introduction or spread of several serious diseases has been prevented. Among these may be mentioned Chrysophlyctis, the English potato disease; a new disease of matting sedges; a disease of figs; etc.</p>		
<b>FRUIT-DISEASE INVESTIGATIONS.</b>	<b>FRUIT-DISEASE INVESTIGATIONS.</b>	<b>FRUIT-DISEASE INVESTIGATIONS.</b>
(M. B. Waite, pathologist in charge.)	(M. B. Waite, pathologist in charge.)	(M. B. Waite, pathologist in charge.)
Salaries, statutory..... \$1,912.50	Salaries, statutory..... \$2,320.00	Salaries, statutory..... \$2,320.00
Salaries, lump fund..... 21,955.83	Salaries, lump fund..... 23,640.00	Salaries, lump fund..... 28,640.00
Miscellaneous expenses and supplies..... 4,594.68	Miscellaneous expenses and supplies..... 3,370.00	Miscellaneous expenses and supplies..... 4,370.00
Traveling and field expenses..... 6,377.26	Traveling and field expenses..... 7,065.00	Traveling and field expenses..... 9,065.00
Total expenditures..... 34,840.27	Total..... 36,395.00	Total..... 44,395.00
Outstanding liabilities..... 439.49		
Total expenditures and liabilities..... 35,279.76		
(1) General office and laboratory work..... <sup>1</sup> 5,417.66	(1) General office and laboratory work..... <sup>2</sup> 7,240.00	(1) General office and laboratory work..... <sup>2</sup> 8,740.00
<p>This project includes the necessary routine office and laboratory work in connection with the field investigations; the carrying on of correspondence; the indexing and care of specimens; the preparation of drawings and illustrations for bulletins and reports and other similar work.</p> <p><i>Results.</i>—The results under this project are reflected in the progress noted under the other projects described in the following paragraphs. They also consist in the dissemination of information by correspondence and the distribution of publications, and new discoveries as to the treatment of orchard diseases throughout the country.</p>		

<sup>1</sup> Includes statutory salaries amounting to \$1,912.50.<sup>2</sup> Includes statutory salaries amounting to \$2,320.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FRUIT-DISEASE INVESTIGATIONS—Continued.	FRUIT-DISEASE INVESTIGATIONS—Continued.	FRUIT-DISEASE INVESTIGATIONS—Continued.
(2) Eradication of pear blight..... This work was originally started in the South, but is now conducted in California, Oregon, and to some extent in other Western States, with a view to preventing the destruction of pear orchards of those States, which are valued at many millions of dollars. Pear blight has been and is devastating these orchards, and the department, in cooperation with the State authorities, has been working to check its spread. The work consists of practical orchard demonstrations of methods of eradicating the blight. Results.—Field demonstrations in the methods of eradicating blight have been made at several points in the Eastern States for the benefit of individual orchardists and fruit-tree inspectors in Virginia, West Virginia, Pennsylvania, Maryland, and New York States. A disastrous form of pear blight attacks both pear and apple trees at the collar, girdling or partially girdling trees at the ground line and extending downward to roots and stocks as well as upward on the trunks. It has been increasingly serious on the apple in Virginia, West Virginia, and Pennsylvania. It has always been notably bad in Colorado and other Western States. Investigational work and field demonstrations in controlling this form of blight have been pursued. In California and southern Oregon a large amount of work has been done for three or four years in pear-blight eradication. This work has been successful in the main. In some cases entire districts have been saved from destruction. Progressive orchardists and communities where the work has been carried out have succeeded in holding the disease in check and have grown profitable crops of pears. Notable success has been obtained in the Rogue River Valley and excellent progress has been made in educating fruit growers and horticultural inspectors as to the methods of combating this disease.	(2) Eradication of pear blight.... \$4,189.43	(2) Eradication of pear blight... \$4,420.00 The increase of \$500 is desired for extending this work to other sections of Oregon, Washington, and Idaho.
(3) Eradication of "little peach," peach yellows, etc..... The objects of this work are to demonstrate the value of eradication methods against the "little peach" and peach yellows, and to afford a practical illustration of the importance of eradication in their treatment throughout the country. Investigations of various other diseases of the peach, such as the California blight, or gumming fungus, are also being made. Results.—In the Michigan peach belt, where work on the "little peach" disease was conducted for several years, it has been demonstrated that the disease can be controlled by the eradication method, and that it belongs to the same group of diseases as does the disease known as peach yellows. Where eradication has been properly carried out the orchards have been saved. The eradication tests in Michigan and New York have been practically completed and similar co-operative tests are planned for other districts. Further studies are being made in California and Oregon, on the peach and on the related stone fruits. In California the experiments to control the very serious disease there known as the peach blight, or gumming fungus, have shown that the disease can be completely controlled by the use of standard Bordeaux mixture, or lime and sulphur wash, applied early in the fall. The methods recommended by the department have been widely used in California with complete success, and it has been estimated that the treatment has saved many millions of dollars.	1,276.74	(3) Eradication of "little peach," peach yellows, etc..... 965.00
(4) Investigations in general orchard pathology..... This work includes the study of various diseases of fruits and fruit trees and methods of combating them; the general identification of diseases of fruit and nut trees, including both deciduous and citrus fruits. The work involves microscopic and laboratory studies, a study of the life history of the parasites attacking fruit trees; a study of fungicides for use in treating fruit diseases and of the various methods of preparing and applying them; an investigation of the russetting of fruits caused by fungicides, and of methods of avoiding this trouble; studies in orchard nutrition and malnutrition, particularly of the relation of various artificial and natural fertilizing ingredients to disease resistance; investigations of the pollination of orchard fruits; and studies of the chlorotic diseases of fruits; and studies of the chlorotic diseases of fruits and various other diseases of the fruit and tree, as well as of nut crops, such as the pecan. Results.—The investigations of orchard pollination have proved the necessity of planting two or more varieties alternately rather than large blocks of single varieties, in order to insure a full crop of fruit. The study of fungicides has greatly facilitated the progress of spraying in the United States, particularly the avoiding of fruit russetting by the substitution of the sulphur compounds.	6,302.80	(4) Investigations in general orchard pathology..... 4,020.00 The increase of \$4,000 is desired to take up the work of citrus disease investigations, particularly the wither-tip fungus in Florida and California, and the orange blight in Florida; to investigate the malnutrition of fruit trees, particularly the irrigated orchards of the West and also the citrus orchards of southern California; to keep up with the increasing demands for miscellaneous orchard-disease investigations, and to take up more thoroughly a study of the fruit decays and the fungi producing them.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FRUIT-DISEASE INVESTIGATIONS—Continued.</b>	<b>FRUIT-DISEASE INVESTIGATIONS—Continued.</b>	<b>FRUIT-DISEASE INVESTIGATIONS—Continued.</b>
<p>The life history of the pecan disease known as scab has been largely worked out in South Carolina and Georgia by experimentation, and a successful method of control has been found by spraying. Many valuable pathological facts relating to the disease have been worked out. Studies have been made of the immunity of many of the different varieties of the pecans to scab, and while the disease can be prevented if necessary by spraying, the conclusion has been reached that most of the difficulty can be avoided by selecting resistant varieties or top working seedlings or susceptible varieties to resistant sorts.</p>		
(5) Peach and plum brown-rot investigations..... \$4,005.08	(5) Peach and plum brown-rot investigations..... \$5,000.00	(5) Peach and plum brown-rot investigations..... \$5,000.00
<p>This work consists of experiments and demonstrations in the control of the brown rot of peaches, plums, and other stone fruits, and also an investigation of peach foliage injury by spraying with fungicides. The annual loss from the brown rot exceeds \$2,000,000, and the fruit growers have been helpless to prevent it. The object of this work is to develop a satisfactory treatment for the disease.</p> <p><i>Results.</i>—In the investigation of peach-foliage injury by spraying, it has been found that a sulphur, with no other heat than that produced by the slaking of the lime, gives a preparation which is not injurious to the foliage and which will prevent scab and brown rot, the two most destructive diseases of the peach fruit. During the season of 1910 experiments and demonstrations were conducted at several points in Georgia and a large number of peach growers of that State were personally instructed as to the practical application of the remedy. Similar work was conducted in Virginia and West Virginia, and in all cases the commercial success of the treatment was fully demonstrated. Through cooperation with the Bureau of Entomology, tests were made with the lime-sulphur spray in conjunction with arsenical poisons. The result was a successful combination spray controlling the peach and plum curculio, as well as the fungous diseases of the peach. This accomplishment places commercial spraying of the peach on the same satisfactory basis as that of the apple, a thing hitherto unattained, and the peach growers are eagerly adopting the treatment as an important part of their orchard work.</p>		
(6) Apple-spraying demonstrations..... 5,471.16	(6) Apple-spraying demonstrations..... 5,750.00	(6) Apple-spraying demonstrations..... 6,750.00
<p>During the season of 1910 this work was conducted in Virginia and Kansas chiefly, the objects being two-fold:</p> <p>First. To instruct the orchardist in the best methods of disease control and demonstrate the value of spraying by comparing the yield of good fruit from sprayed and unsprayed blocks.</p> <p>Second. To test new fungicides and determine or perfect the treatment for new diseases.</p> <p><i>Results.</i>—The work has invariably resulted in more general spraying and more thorough work and the adoption of better methods. Perhaps the most important feature of the recent work on apple spraying is the experiments with lime-sulphur preparations as a substitute for Bordeaux mixture. Lime-sulphur solution has proved to be equally as effective as Bordeaux on such diseases as apple scab and leaf spot and is not so injurious to fruit and foliage as the latter. It seems likely that within a few years the lime-sulphur fungicides will almost entirely supplant Bordeaux mixture in the treatment of fruit diseases. In all of this work combination treatments have been made to prevent diseases caused by fungi and injuries produced by insects, the latter phase of the work being in co-operation with the Bureau of Entomology.</p>		<p>The increase of \$1,000 is desired to increase the efficiency and usefulness of this important branch of fruit disease work; to more promptly and properly fulfill the demands from fruit growers for assistance in various orchard sections.</p>
(7) Studies of grape and other small-fruit diseases..... 8,616.89	(7) Studies of grape and other small-fruit diseases..... 9,000.00	(7) Studies of grape and other small-fruit diseases..... 10,000.00
<p>The grape investigations are conducted in the grape-growing sections of Pennsylvania, New Jersey, New York, Michigan, and other States, in cooperation with the State experiment stations. Many of the diseases of the grape are in great need of further investigation, and the work consists of the study of the parasites causing the diseases, together with spraying experiments in accordance with the most recent developments of fungicides and machinery, and demonstrations of the practical efficiency of such methods.</p> <p>Studies are also being made of the diseases of the cranberry and other small fruits; studies of the life history of the anthracnoses and other fungi which infect small fruits and related plants, and various other problems. The objects are to secure a complete knowledge of the fungous parasites and other pathological factors which produce the diseases, especially of their method of growth, reproduction, distribution, and manner of infection, and also the most practical, economical, and effective means of combating them. The work also includes spraying experiments and demonstrations.</p>		<p>The increase of \$1,000 is desired to meet increased demands for work on grapes, cranberries, and other small fruits throughout the country.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FRUIT-DISEASE INVESTIGATIONS—Continued.	FRUIT-DISEASE INVESTIGATIONS—Continued.	FRUIT-DISEASE INVESTIGATIONS—Continued.
<p><i>Results.</i>—The grape-disease work has resulted in demonstrating that the black rot and other fungous diseases of the grape which have threatened to cause the abandonment of vineyards in some sections can be successfully and profitably controlled, even under the most adverse climatic conditions. The past season's work has demonstrated that vineyards practically abandoned on account of loss from black rot can be brought into profitable bearing condition by proper spraying, in connection with pruning and cultivation. The results of spraying experiments in such a vineyard the past season were 90.8 per cent of rot on the unsprayed check plot and only 4.3 per cent rot on the best-sprayed plot. A bulletin giving the results of the grape-spraying experiments during the past three years has been published.</p> <p>The work on cranberry diseases, which has been in progress for several years, has resulted in the saving of from 90 to 95 per cent of the fruit by spraying. Bulletins describing the diseases and methods of their control have been issued and placed in the hands of growers, who are successfully using the methods recommended and demonstrated.</p> <p>The complete life cycle of 12 forms of anthracnoses from different plants have been successfully worked out and much additional knowledge of their relationships and behavior has been obtained.</p>		
FOREST PATHOLOGY INVESTIGATIONS.	FOREST PATHOLOGY INVESTIGATIONS.	FOREST PATHOLOGY INVESTIGATIONS.
(Haven Metcalf, pathologist in charge.)	(Haven Metcalf, pathologist in charge.)	(Haven Metcalf, pathologist in charge.)
Salaries, statutory..... \$1,200.00	Salaries, statutory..... \$1,200.00	Salaries, statutory..... \$2,040.00
Salaries, lump fund..... 11,075.00	Salaries, lump fund..... 12,330.00	Salaries, lump fund..... 17,130.00
Miscellaneous expenses and supplies..... 1,250.12	Miscellaneous expenses and supplies..... 580.00	Miscellaneous expenses and supplies..... 1,440.00
Traveling and field expenses..... 3,815.03	Traveling and field expenses..... 3,600.00	Traveling and field expenses..... 6,100.00
Total expenditures..... 17,340.15	Total..... 17,710.00	Total..... 26,710.00
Outstanding liabilities..... 237.60		
Total expenditures and liabilities..... 17,577.75		
PROJECTS.	PROJECTS.	PROJECTS.
(1) General office and laboratory work..... 13,818.00	(1) General office and laboratory work..... 14,080.00	(1) General office and laboratory work..... 14,080.00
<p>This project includes the maintenance of laboratory facilities, the conducting of correspondence, and various details connected with the field investigations.</p> <p><i>Results.</i>—The results under this project are reflected in the progress noted under the various field projects, described in the following paragraphs.</p>		
(2) Investigations of forest-tree diseases..... 3,631.36	(2) Investigations of forest-tree diseases..... 5,770.00	(2) Investigations of forest-tree diseases..... 14,770.00
<p>This project includes the study and control of all important diseases of forest trees, and has for its object the saving of the immense losses of standing timber through disease and premature decay, especially in the national forests. The work is conducted in close cooperation with the Forest Service.</p> <p><i>Results.</i>—The range, extent, and seriousness of the most important forest-tree diseases have been approximately determined, and some of the general principles of forest hygiene have been worked out for this country, so that the way is now open to undertake extensive experiments in the forests under various local conditions to eliminate the diseases so widely prevalent.</p>		<p>The estimated increase of \$9,000 is desired for the purpose of putting into immediate application in three districts of the national forests the results so far obtained in the preliminary survey and experiments, and to experiment further along the same lines under the various local conditions obtaining in these districts.</p>
(3) Investigations of diseases of forest-tree nursery stock..... 4,903.02	(3) Investigations of diseases of forest-tree nursery stock..... 3,470.00	(3) Investigations of diseases of forest-tree nursery stock..... 3,470.00
<p>This project includes the investigation and control of a number of diseases, such as leaf blight and damping off of coniferous seedlings, white-pine blister rust, and many other diseases that interfere with forest nursery practice and reforestation. The objects are the prevention or elimination of these diseases.</p> <p><i>Results.</i>—The leaf blight of coniferous seedlings has been shown to be controllable by slight changes in the method of handling water supply and shade in the nursery. Damping off of eucalyptus seedlings has been shown to be controllable by the use of proper soil. White-pine blister rust has been found and eradicated in 230 places in North America, and efforts are being made to keep out, or at least to locate and watch, further shipments of diseased stock.</p>		
(4) Investigations of diseases of timber..... 3,361.10	(4) Investigations of diseases of timber..... 2,385.00	(4) Investigations of diseases of timber..... 2,385.00
<p>This project includes the study of all pathological and mycological aspects of the rotting and staining of structural timber, with the object of devising better methods of wood preservation. The work is carried on at the forest products laboratory of the Forest Service, at Madison, Wis., in cooperation with that service.</p>		

<sup>1</sup> Includes statutory salary, \$1,200.

<sup>2</sup> Includes statutory salary, \$2,040.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FOREST PATHOLOGY INVESTIGATIONS—Continued.</b>	<b>FOREST PATHOLOGY INVESTIGATIONS—Cont'd.</b>	<b>FOREST PATHOLOGY INVESTIGATIONS—Con.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p><i>Results.</i>—The technical results secured in this work are being utilized in the standard methods of wood preservation devised jointly by this bureau and the Forest Service and now generally employed on a large scale in timber operations.</p> <p>(5) Investigations of diseases of ornamental trees ..... \$1,814.27</p> <p>This project includes the study of the bark disease of the chestnut and of many other diseases of ornamental trees and shrubs, and has for its object the elimination or control of these diseases and the diffusion of knowledge of the methods to be employed in their control or prevention.</p> <p><i>Results.</i>—Experiments in cutting out trees diseased with the chestnut-bark disease in localities where the trouble is just appearing have proved very successful in checking the spread of the disease, and the method has been adopted on a large scale in many places, especially in Pennsylvania. The pruning and cutting-out method of controlling this disease in orchard and small ornamental trees, previously reported, has continued successful and has been widely adopted. Through extensive correspondence these results and the present knowledge of treatment of other ornamental-tree diseases has been widely diffused.</p> <p><b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY.</b></p> <p>(W. A. Orton, pathologist in charge.)</p> <p>Salaries, statutory ..... \$702.50 Salaries, lump fund ..... 9,339.66 Miscellaneous expenses and supplies ..... 4,064.45 Traveling and field expenses ..... 2,930.75 Total expenditures ..... 17,037.36 Outstanding liabilities ..... 264.50 Total expenditures and liabilities ..... 17,301.86</p> <p><b>PROJECTS.</b></p> <p>(1) Office and laboratory work ..... 12,952.96 This project includes the routine laboratory work in connection with the various investigations, the general office details and correspondence, and other similar features connected with the field work. <i>Results.</i>—The results under this project are reflected in the progress noted under all of the other projects, described in the following paragraphs.</p> <p>(2) Cotton disease investigations ..... 2,522.49 This work includes the study of cotton wilt, anthracnose, blight, rust, shedding, root rot, etc.; the breeding of varieties of cotton resistant to wilt, root knot, etc.; and demonstrations of the control of the various diseases affecting cotton. <i>Results.</i>—Resistant varieties of sea-island cotton have been developed as a result of this work. Methods for the improvement of sea-island cotton in Georgia and Florida have been developed, and a farmers' bulletin has been published showing that seed selection, improvement of cultural conditions, and more careful handling of the product will fully remedy existing conditions. It has been shown that the Texas root rot of cotton can be effectively controlled by deep fall plowing and the rotation of crops. This part of the work has been brought to completion.</p> <p>The wilt-resistant varieties, Dillon and Dixie, bred by the Bureau of Plant Industry, have proved entirely successful, and where our advice concerning rotation of crops is followed complete relief is secured. These varieties and cultural methods are now being brought to the attention of the thousands of farmers who need them.</p> <p>(3) Forage crop disease investigations ..... 905.00 This project comprises a continuation of work on the development of disease-resistant cowpeas, which are essential for the control of root knot of cotton and other crops in the Southern States, as well as studies of diseases of alfalfa and clover, with particular reference to those attacking vegetables and of importance in truck crop and beet rotations.</p>	<p>(5) Investigations of diseases of ornamental trees ..... \$2,005.00</p> <p><b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY.</b></p> <p>(W. A. Orton, pathologist in charge.)</p> <p>Salaries, statutory ..... \$900.00 Salaries, lump fund ..... 10,166.67 Miscellaneous expenses and supplies ..... 4,393.33 Traveling and field expenses ..... 2,350.00 Total ..... 17,810.00</p> <p><b>PROJECTS.</b></p> <p>(1) Office and laboratory work... *3,271.00</p> <p>(2) Cotton disease investigations. 2,630.00</p> <p>(3) Forage crop disease investigations ..... 905.00</p>	<p>(5) Investigations of diseases of ornamental trees ..... \$2,005.00</p> <p><b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY.</b></p> <p>(W. A. Orton, pathologist in charge.)</p> <p>Salaries, statutory ..... \$900.00 Salaries, lump fund ..... 12,700.00 Miscellaneous expenses and supplies ..... 6,935.00 Traveling and field expenses ..... 5,225.00 Total ..... 25,760.00</p> <p><b>PROJECTS.</b></p> <p>(1) Office and laboratory work.. *3,271.00</p> <p>(2) Cotton disease investigations. 6,630.00 The estimated increase of \$4,000 is desired to secure an increased production of the wilt-resistant varieties of cotton by cooperating farmers, and to bring about a more widespread adoption of the improved methods of control of diseases.</p> <p>(3) Forage crop disease investigations ..... 1,000.00 The estimated increase of \$95 is desired to meet a slight increase in expenses of this work.</p>

\* Includes statutory salaries amounting to \$702.50.

\* Includes statutory salaries amounting to \$900.

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Cont'd.	COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Continued.	COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>Results.—In addition to a knowledge of cowpea diseases, there have been obtained new hybrid cowpeas of remarkable promise in that they resist both wilt and root knot, and are productive and of upright growth. These should eventually supersede all other varieties in sandy soil throughout the South.</p> <p>Knowledge of alfalfa and clover diseases has been secured that will assist in the control of these troubles.</p>		
(4) Breeding rust-resistant asparagus.....	(4) Breeding rust-resistant asparagus.....	(4) Breeding rust-resistant asparagus.....
\$3,601.32	\$3,650.00	\$3,650.00
<p>This work is conducted in cooperation with the Massachusetts Agricultural Experiment Station, having for its object the securing of commercial strains of asparagus which will be resistant or immune to the rust disease, which is threatening the industry in a number of sections.</p> <p>Results.—A large number of varieties and strains and numerous selections from resistant plants are growing in an experimental field at Concord, Mass. Pedigreed seed has been secured from the most resistant plants in this and in neighboring fields. New strains were originated from standard varieties the past season, which appear to possess the resistance sought for. The outlook for important results from further work is most encouraging. Hybrids of resistant uncultivated species and the cultivated varieties have been made and are being tested experimentally.</p>		
(5) Potato-disease investigations.....	(5) Potato-disease investigations.	(5) Potato-disease investigations.
1,500.00	1,500.00	3,500.00
<p>This work is conducted in cooperation with the Vermont Agricultural Experiment Station and consists of laboratory and field researches on the life history of the late-blight fungus and on the underlying reasons for disease resistance shown by certain varieties.</p> <p>Results.—Several facts have been learned that will throw light on the life history of the late-blight fungus. Decided resistance to blight has been found in several varieties and a method discovered by which disease resistance may be tested in the laboratory, thereby greatly facilitating future breeding. Very valuable data have been secured concerning resistance to early blight, which is a more important disease over the country as a whole during the present season. Successful results from the hybridization of varieties have been obtained. California potato diseases are being studied and measures for relief have been pointed out to growers in that State. Potato wilt, blackleg, and internal spot, three serious new diseases have been studied and means of control are being tested.</p>		<p>The estimated increase of \$2,000 is desired to continue the study of the new potato diseases on the larger scale required by their serious nature and increased prevalence; to provide equipment for determining the disease resistance of new strains developed by the department's potato breeders; to guard against the introduction from abroad of potato wart and other serious diseases prevalent there.</p>
(6) Investigations of miscellaneous truck-crop diseases....	(6) Investigations of miscellaneous truck-crop diseases.....	(6) Investigations of miscellaneous truck-crop diseases..
4,154.00	4,154.00	6,009.00
<p>This work includes experiments and demonstrations in the control of various diseases of peas, beans, cucumbers, cabbage, lettuce, radishes, carrots, tomatoes, and other truck crops; also a study of the effects of over-fertilization of truck crops particularly in the physiological and pathological effects of the continued excessive application of commercial fertilizers on various vegetables; and the breeding of watermelons for wilt resistance, with the object of developing and distributing varieties which will resist the wilt disease.</p> <p>Results.—Demonstrations of the control of the diseases of cucumbers, melons, and other crops have been carried out with success. Spraying experiments in the control of the pickle spot of cucumbers in Michigan have been completed. Field experiments to control bacterial blight of tomato in Michigan and cabbage yellows and wilt in Ohio have been conducted.</p> <p>A preliminary study of the decay of cabbage in winter storage has shown that much of the loss can be prevented by improvements in the construction and management of storage houses. Methods of lessening the loss from black rot and wilt are being worked out.</p> <p>The work with watermelons has resulted in combining the disease-resistant quality of the citron with the watermelon. Selections of resistant strains have continued for several years, and a strain which comes largely true has been secured as a result of our work in South Carolina. A commercial test of this variety has been made, proving it to be of good quality and highly resistant to wilt. It has also very good keeping quality and is a very good shipper when grown in the district where it was bred.</p> <p>It has been found that the diseases of truck crops induced by improper fertilization can be quickly remedied by rational fertilizing, together with the use of stable manure, lime, and green manures. This problem is of great interest to the entire trucking belt, where large areas of the best trucking soils are becoming less productive each year.</p>		<p>The estimated increase of \$1,855 is desired to extend the field work particularly to learn to control diseases of tomatoes, cabbage, and sweet potatoes.</p>
(7) Plant-disease survey.....	(7) Plant-disease survey.....	(7) Plant-disease survey.....
1,666.09	1,700.00	1,700.00

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Cont'd.</b>	<b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Continued.</b>	<b>COTTON AND TRUCK DISEASES AND PLANT DISEASE SURVEY—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
This work consists of a comprehensive annual survey of the plant diseases prevalent in the United States. Cooperation with the officers of a number of the State experiment stations is practiced. The object is the collection of information and material regarding the annual prevalence of all plant diseases; to learn the distribution of new diseases; to study epidemics and their relation to weather and other factors; and to map and preserve permanent records of all such diseases.		
<i>Results.</i> —A great quantity of valuable data regarding the distribution and prevalence of various plant diseases has been secured, and in many cases the factors influencing their spread have been learned. The department is thus kept informed of the need for further investigations along pathological lines. The results of the plant-disease survey are published annually in the appendix of the yearbook of the department.		
A comprehensive survey of the area surrounding San Antonio, Tex., has been completed and is being prepared for publication.		
<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS.</b>	<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS.</b>	<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS.</b>
(Walter T. Swingle, physiologist in charge.)	(Walter T. Swingle, physiologist in charge.)	(Walter T. Swingle, physiologist in charge.)
Salaries, statutory..... \$4,660.00	Salaries, statutory..... \$7,020.00	Salaries, statutory..... \$9,020.00
Salaries, lump fund..... 16,976.07	Salaries, lump fund..... 15,310.66	Salaries, lump fund..... 13,310.00
Miscellaneous expenses and supplies..... 5,291.21	Miscellaneous expenses and supplies..... 3,504.34	Miscellaneous expenses and supplies..... 11,505.00
Traveling and field expenses..... 2,882.05	Traveling and field expenses..... 6,200.00	Traveling and field expenses..... 8,200.00
Total expenditures..... 29,809.33	Total..... 32,035.00	Total..... 42,035.00
Outstanding liabilities..... 837.39		
Total expenditures and liabilities..... 30,646.72		
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) General supervisory and office work..... <sup>1</sup> 5,770.00	(1) General supervisory and office work..... <sup>2</sup> 6,585.34	(1) General supervisory and office work..... <sup>2</sup> 6,585.34
This project includes the planning and direction of the field investigations, the conducting of correspondence and keeping of records, and other details connected with the field work.		
<i>Results.</i> —The results under this project are reflected in the progress noted under all the other projects described in the following paragraphs.		
(2) General physiological investigations of crop plants..... <sup>3</sup> 3,385.07	(2) General physiological investigations of crop plants..... <sup>4</sup> 5,798.33	(2) General physiological investigations of crop plants..... <sup>4</sup> 10,298.33
This project includes the testing of many varieties of crop plants at field stations throughout the southwestern United States, and in particular the work conducted in cooperation with the Indian Service of the Department of the Interior having for its objects the testing of crops promising for culture on the Indian reservations of the Southwest, with a view to finding profitable crops for the Indians to grow for themselves and to familiarize them with the handling of crops likely to be grown by the white settlers near by by utilizing Indian labor.		The estimated increase of \$4,500 is desired for the extension of the experimental work, not only at Sacaton, Ariz., but on the other Indian reservations of the Southwest where the conditions seem favorable for the culture of Egyptian cotton. The increase will be utilized in the preparation and planting of experimental tracts and the selection and rapid propagation and distribution among the Indian reservations of the varieties of cotton and other crop plants best suited to the different soil and climatic conditions.
<i>Results.</i> —Cooperative testing and demonstration gardens have been established on the Indian reservations at Sacaton, Ariz.; Shiprock, N. Mex.; and Pyramid Lake, Nev. The Bureau of Plant Industry furnishes the seeds, plants, etc., and directs the experiments, the Office of Indian Affairs of the Department of the Interior furnishing land, irrigation water, and labor. Egyptian cotton, Bermuda onions, citranges, dates, pistaches, pecans, alfalfa, drought-resistant tree crops, grapes, figs, etc., are being tested.		
Much attention is being devoted to the establishment of Egyptian cotton culture, in cooperation with other offices of the Bureau of Plant Industry. A 20-acre field of this cotton is growing at the garden at Sacaton, Ariz., and the Indians are being trained in the handling of this crop. The crops produced during the last two years were combined and sold by the Office of Indian Affairs at the unusually high price of 31 cents a pound. It is believed that ultimately the Indians will grow cotton themselves, to be picked by the women and children, while the men hire out to the white settlers near by.		

<sup>1</sup> Includes statutory salaries amounting to \$4,000.<sup>2</sup> Includes statutory salaries amounting to \$4,820.<sup>3</sup> Includes statutory salaries amounting to \$660.<sup>4</sup> Includes statutory salaries amounting to \$1,200.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.</b>	<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.</b>	<b>CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
(3) Date investigations..... \$2,955.13 The objects of this work are to bring about the establishment of date culture on a commercial scale in the United States, and particularly to investigate the life history of the date palm with reference to the different varieties and the methods of culture best adapted to American conditions. <i>Results.</i> —The date palms in the experimental garden at Mecca, Cal., are fruiting freely, and the famous Deglet Noor and a number of other fine varieties have ripened at this and at the other gardens in the Southwest. There is now positive proof that dates of the highest quality can be produced in California. Particular interest has been aroused by the "dry dates," which have been liked by all who have tested them. This is a type of date unknown to American and European consumers. The fruit is dry and hard, and can easily be kept for several years if protected from weevils. The four other cooperative date gardens in California, Arizona, and Texas are making excellent showings, and a number of dates of fine quality have ripened at these gardens. In cooperation with private individuals, thousands of date seedlings are being propagated in the Southwest, and much interest is being shown by growers in the planting of seedling date orchards in the hope of securing new varieties better adapted to American climatic conditions. In this way the foundation is being laid for the breeding of distinctly American varieties of dates superior to any now grown in the oases of the Old World. Already the date gardens of this country show a finer assortment of choice date varieties than can be found in any one date region of the Old World. The investigations under this project are rapidly making it possible to narrow down the number of date varieties best suited for culture in this country to some half dozen or a dozen varieties.	(3) Date investigations..... \$4,406.00	(3) Date investigations..... \$6,906.00 The estimated increase of \$2,500 is desired for the purpose of securing an additional experimental tract in southeastern California, where experiments in the rapid propagation, curing, and storing of dates can be carried on. The increase will be used in clearing, leveling, and providing irrigation for such a tract.
(4) Fig investigations..... 2,837.20 The objects of this work are to investigate the process of caprifigation of the fig and to study in detail the life history of the figs used for drying purposes, and also of the caprifigs in which the insect is produced. <i>Results.</i> —It has been possible as a result of this work to advise settlers in new regions and to prevent losses which would inevitably occur from planting fig orchards in sections where they could not succeed, and, on the other hand, to encourage growers in regions where the culture of the fig is likely to prove profitable. The seedling fig orchard at Loomis, Cal., set out in 1886 by a private grower, has been leased by the Department of Agriculture, and cuttings from the choice figs and caprifigs originated there have been distributed to fig growers throughout the country on condition that the recipient plant out a designated number of seedling figs to be furnished by the department. The results obtained at Loomis show that a fair proportion of these seedlings will produce edible varieties, some of them even superior to the best imported sorts, with the added advantage of being originated on the particular farm where they are to be grown. It is believed that, as a result of these experiments, thousands of new varieties particularly adapted to American conditions will be originated, so that it is very probable that American varieties of figs will ultimately lead the world both in quality and productiveness.	(4) Fig investigations..... 4,301.00	(4) Fig investigations..... 5,301.00 The estimated increase of \$1,000 is desired for the purpose of establishing minor fig and caprifig orchards throughout the foothill regions of the Sierra Nevada Mountains, in order to aid fig growers in all parts of the country to secure an assortment of caprifigs adapted to their particular soil and climatic conditions. The whole future of the culture of the best sorts of drying figs of the Smyrna type depends upon the securing of a proper assortment of caprifigs.
(5) Breeding of new citrus fruits..... 3,848.38 This work is a continuation of experiments inaugurated a number of years ago in the development by hybridization of hardy frost-proof oranges and new and improved types of citrus fruits. It has been the aim to secure hardy oranges which may be grown in more northern regions than the present orange belt and which will be able to resist severe freezes; to obtain hybrids combining the loose skin of the tangerine with the quality and form of the ordinary orange; and to secure improved varieties of tangerines, oranges, pomelos, and other citrus fruits. <i>Results.</i> —A new group of hardy citrus fruits, or "citranges," has been developed and distributed for trial. These have proved to be very useful substitutes for lemons and can be grown as home fruits throughout the South, the warmer parts of Idaho and	(5) Breeding of new citrus fruits..... 16,747.33	(5) Breeding of new citrus fruits.. 17,747.33 The estimated increase of \$1,000 is desired for the propagation and dissemination of the most promising of the new hybrid citrus fruits, the results of the past two years' breeding work. These must be cared for and propagated as rapidly as possible for distribution to growers in regions where these new fruits are likely to prove a success.

<sup>1</sup>Includes statutory salaries amounting to \$1,000.

<sup>1</sup>Includes statutory salaries amounting to \$2,000.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats. p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.	CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.	CROP PHYSIOLOGY AND BREEDING INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>Nevada, and even in Oregon and Washington. Another new group of citrus fruits, the "tangelo," has been produced, as well as two new tangerines and two new limes.</p> <p>A large number of crosses have been made between the orange and citrange. The seedlings from these crosses show a wide range of leaf character, some of them closely resembling the orange, though undoubtedly having one-quarter <i>Citrus trifoliata</i> blood. There is every reason to expect that some of these "three-quarter" hybrids will yield fruits sufficiently sweet to be available for table use and at the same time have something of the hardness of the trifoliolate orange.</p>		
(6) Arboricultural investigations..... \$5,596.47	(6) Arboricultural investigations.. \$3,122.00	(6) Arboricultural investigations. \$4,122.00
<p>This work has for its objects the working out of the life history of fruit, nut, and forage trees likely to succeed in the drier parts of the Southwest, and to bring about the utilization of such tree crops in dry-land regions. Among the crops under trial are the pistache, almond, apricot, fig, and olive.</p> <p>Results.—A comparatively little known group of fruit trees, the nearest American relatives of the peach, almond, and apricot, have been under investigation. Four of these, occurring in dry situations, are of much promise as stocks for the cultivated species. At least one of them has been used successfully as a stock upon which to graft the ordinary almond in dry situations.</p> <p>In cooperation with another office of the bureau, work is under way in the testing of the most drought-resistant varieties of the olive at various points in the Southwest. A bulletin on dry-land olive culture in that region has been published, confirming in a most striking manner reports of the drought-resisting powers of the olive.</p>		<p>The estimated increase of \$1,000 is desired for the propagation and distribution of the most promising of the dry-land tree crops which have been discovered as a result of this work, in particular wild types of our common stone fruits, and to place these plants among growers in the dry regions of the United States</p>
(7) Miscellaneous laboratory and field work..... 2,548.25	(7) Miscellaneous laboratory and field work..... 1,075.00	(7) Miscellaneous laboratory and field work..... 1,075.00
<p>This project includes various investigations, such as a study of the application of electricity in plant culture, to determine by field tests whether electricity can be applied to advantage in truck farming, this work being conducted in cooperation with another office of the bureau; an investigation of the stimulation treatment of crops, to discover the causes of increased yields of plants sprayed with Bordeaux mixture and of cereals treated to prevent smut; the improvement of high-power microscopes for use in laboratory investigations; a study of the life history of the pistache nut and its wild relatives, with a view to its commercial culture; and similar work on the truffle fungus and truffle oaks, with the object of developing a new industry in truffle culture in the United States.</p> <p>Results.—In cooperation with the physical laboratory of this bureau, investigations have been made which enable the department to advise correspondents as to the real status of "electroculture" and to prevent the exploitation of fraudulent schemes and claims with regard to the use of electricity in farming.</p> <p>In the work on the pistache a number of scions of the best commercial varieties of flavoring pistaches have been secured from Sicily and Asia Minor, and these are under experimentation in the Southwest. It is believed that the pistache will prove valuable on unirrigated lands where other fruit and nut crops will not succeed.</p>		
(8) Clover and alfalfa investigations..... 3,706.22		
<p>The objects of this work were to investigate the life history of clover and alfalfa with special reference to climatic, soil, and cultural requirements of the various varieties, and at the same time to determine whether change of seed is beneficial and practical.</p> <p>Results.—A new long-season alfalfa for the Southwest has been discovered which will grow at lower temperatures than any other known alfalfa. This variety passes without injury through frosts which kill all ordinary alfalfas.</p> <p>A new type of red clover has been found which is superior to the ordinary varieties in cultivation. Each of these new varieties has been described in a publication, and their trial can be recommended with reasonable certainty of success.</p> <p>NOTE.—Work on alfalfa and clover under this office has been discontinued as a separate project. Such further experimental work with these crops as is required will be conducted mainly in connection with and incidental to the other crop physiological and breeding projects in the Southwest.</p>		

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>SOIL BACTERIOLOGY AND WATER PURIFICATION INVESTIGATIONS.</b>	<b>SOIL BACTERIOLOGY AND WATER PURIFICATION INVESTIGATIONS.</b>	<b>SOIL BACTERIOLOGY AND WATER PURIFICATION INVESTIGATIONS.</b>
(Karl F. Kellerman, physiologist in charge.)	(Karl F. Kellerman, physiologist in charge.)	(Karl F. Kellerman, physiologist in charge.)
Salaries, statutory..... \$1,200.00	Salaries, statutory..... \$2,520.00	Salaries, statutory..... \$5,100.00
Salaries, lump fund..... 11,746.66	Salaries, lump fund..... 12,575.00	Salaries, lump fund..... 12,975.00
Miscellaneous expenses and supplies..... 2,355.39	Miscellaneous expenses and supplies..... 1,650.00	Miscellaneous expenses and supplies..... 2,670.00
Traveling and field expenses..... 1,098.44	Traveling and field expenses..... 2,150.00	Traveling and field expenses..... 3,150.00
Total expenditures..... 16,400.49	Total..... 18,895.00	Total..... 23,895.00
Outstanding liabilities..... 431.52		
Total expenditures and liabilities..... 16,832.01		
(1) General laboratory and office work..... 16,848.16	(1) General laboratory and office work..... 2 6,785.00	(1) General laboratory and office work..... 2 7,785.00
This project includes the maintenance of laboratory facilities, the conducting of correspondence, and various other details connected with the investigations in soil bacteriology and water purification.		The increase of \$1,000 is desired to provide for additional laboratory facilities made necessary by the normal growth of the work.
Results.—The results under this project are reflected in the progress noted hereafter under the various field and laboratory projects.		
(2) Soil bacteriology investigations..... 6,827.72	(2) Soil bacteriology investigations..... 9,045.00	(2) Soil bacteriology investigations..... 11,145.00
This work includes the isolation and study of the bacteria concerned in nitrification and the investigation of their rôle in plant nutrition; the isolation of various types of soil bacteria and correlation of their economic value, and investigations of the probable correlation of bacteriological activity in the soil with cultural conditions. The work covers the whole question of the relation of bacteria found in soils to fertility and crop production.		The increase of \$2,100 is desired to provide for additional assistance and field expenses due to the natural development of the work, especially the bacteriological investigations in the various trucking regions.
Results.—Extensive studies regarding the correlation between nitrification and crop production have been made in different parts of the United States. It has been found that in certain soils of the Coastal Plain which have a high magnesium content the application of a pure calcium lime, such as oyster-shell lime, is very much more beneficial to the action of the nitrifying bacteria than is the application of lime containing a high percentage of magnesium. Investigations carried on chiefly in Utah, Nevada, and Virginia show a very close relationship between the crop-producing power of a soil and the development of nitrifying bacteria in that soil. In none of the regions under investigation has injurious effect from over nitrification been observed. The greater portion of agricultural land at least supports a balanced bacterial flora, and when accumulation of nitrates has taken place to a certain degree, whether as a result of the application of fertilizers or as the result of the action of nitrifying bacteria, a rapid development of denitrifying bacteria takes place and the quantity of nitrate in the soil is reduced. Our experimental work during the past few years indicates that different soils may contain different quantities of nitrate and that for each soil there is a definite optimum quantity. It is probable that this optimum quantity for any soil may be raised or lowered by methods of cultivation or cropping systems.		
(3) Experiments with legume bacteria..... 2,673.21	(3) Experiments with legume bacteria..... 2,715.00	(3) Experiments with legume bacteria..... 4,615.00
This work consists of the distribution of pure liquid cultures of nitrogen-fixing bacteria for inoculating leguminous plants; the study of the conditions under which nodule-forming bacteria are unable to form nodules; the breeding and selection of more virile types of nodule-producing organisms; and the study of the life history of the nitrogen-fixing bacteria, especially that of the root nodule of the leguminosæ.		The increase of \$1,900 is desired to cover necessary additional field expenses and assistance to supervise the experiments in legume inoculation now under way.
Results.—Pure cultures of nodule-forming bacteria for inoculating legumes have been distributed during the fiscal year ended June 30, 1910, and additional data have been secured concerning the limitations of successful inoculation. Especially with alfalfa in the Eastern States it has been found that successful inoculation is correlated very closely with the reaction of the soil to neutral litmus paper. The inoculation of crimson clover seems to show no correlation with the litmus reaction, and the inoculation of vetch is about halfway between these extremes.		
(4) Water-purification investigations..... 482.92	(4) Water-purification investigations..... 350.00	(4) Water-purification investigations..... 350.00
This includes demonstrations of the copper treatment to eradicate algæ from farm water supplies, and is the result of preliminary experiments on ice ponds, pleasure lakes, etc., to determine the value of copper as a disinfectant and of the copper and chlorine treatment of sewage effluents immediately before their discharge into streams as a means of preventing dangerous bacterial contaminations.		
Results.—Advisory correspondence in regard to the improvements of farm water supplies has been carried on, and in some cases personal supervision of improvements has been undertaken.		

<sup>1</sup>Includes statutory salaries amounting to \$1,200.<sup>2</sup>Includes statutory salaries amounting to \$2,520.<sup>3</sup>Includes statutory salaries amounting to \$5,100.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS. <sup>1</sup>	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS.	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS.
(O. F. Cook, bionomist in charge.)	(O. F. Cook, bionomist in charge.)	(O. F. Cook, bionomist in charge.)
Salaries, statutory.....	Salaries, statutory.....	Salaries, statutory.....
Salaries, lump-fund.....	Salaries, lump-fund.....	Salaries, lump-fund.....
Miscellaneous expenses and supplies.....	Miscellaneous expenses and supplies.....	Miscellaneous expenses and supplies.....
Traveling and field expenses.....	Traveling and field expenses.....	Traveling and field expenses.....
Total expenditures.....	Total.....	Total.....
Outstanding liabilities.....		
Total expenditures and liabilities.....		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Office and laboratory work.....	(1) Office and laboratory work...	(1) Office and laboratory work..
This project includes the correspondence and administrative routine, the preparation of publications, laboratory experiments, and other general details connected with the various lines of field investigations.		
Results.—The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs.		
(2) Acclimatization and adaptation of cotton.....	(2) Acclimatization and adaptation of cotton .....	(2) Acclimatization and adaptation of cotton .....
This work includes the study of weevil-resisting adaptations of native varieties of cotton in weevil-infested regions of tropical America and the acclimatization of the more promising sorts in the United States; also the working out of modifications of cultural methods necessitated by the presence of the boll weevil, special characters and methods of culture which favor drought resistance and enable cotton culture to be extended into dry regions where the boll weevil can do little damage.		
Results.—Weevil-resisting varieties of cotton have been found in Mexico and Central America closely related to the Upland cottons of the United States and having the same cultural characteristics and commercial value. These varieties behave in a very abnormal manner when first planted in the United States, but definite progress is being made toward acclimatization. Some of these varieties are showing distinct advantages over the present Upland cottons, not only with respect to weevil resistance, but in having larger bolls and longer lint than any of the Upland cottons now grown in the United States, combined with other desirable qualities, such as extreme earliness and tolerance of drought, the structure of the leaves being better adapted to restrict the transpiration of water. Uniform strains are now being selected from the most promising of the imported types, to be tested under field conditions as soon as sufficient seed can be obtained.		
Experiments in Texas, Kansas, Arizona, and California indicate that cotton of excellent quality can be produced in many regions where none has been grown in the past, and that cotton yields a marketable product with less water than any other crop now grown in the Southwest.		
The knowledge gained through experiments with the new Central American types of cotton is also being applied in the acclimatization of the Egyptian cotton in Arizona and southern California in securing greater uniformity as well as earlier and more productive plants. The normal behavior and the causes of diversity in Egyptian cotton have been studied in Egypt to obtain facts required for the guidance of this work. This phase of the work is conducted in cooperation with other offices of the bureau.		
(3) Cotton breeding.....	(3) Cotton breeding.....	(3) Cotton breeding.....
In addition to the selection and breeding of improved varieties which will be adapted to special agricultural conditions or commercial purposes, these investigations include a study of the general problems of cotton breeding, such as the relation of external conditions and methods of culture to the local adjustment and breeding of varieties; the effects of cross-pollination and the advantages of isolating pure strains; the breeding value of mutations and hybrids; the agricultural importance of special cultural characteristics, earliness, clustering, and other habits of growth, as well as storm-proof characteristics; and methods of testing varieties for the adequate determination of yield and other cultural qualities. The object is to determine the best methods of securing new varieties and maintaining their uniformity under conditions of commercial production for the guidance of experiment-station workers, private breeders, and farmers who wish to do their own selecting and breeding.		

<sup>1</sup> During the fiscal year 1910 the lump funds for this work were carried under two subappropriations, "cotton breeding" and "crop acclimatization," which were combined under the latter title for the years 1911 and thereafter.  
<sup>2</sup> Includes statutory salaries amounting to \$2,400.  
<sup>3</sup> Includes statutory salary, \$1,400.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>Results.—It has been found that the commercial uniformity of a variety can be maintained by simple mass selection of superior plants if close conformity to the standards of the variety is maintained. A more effective system of selection is being developed, it having been learned that inferior plants can generally be recognized by their external vegetative characteristics and rogued out of the field or the breeding plot before they have blossomed and spread their inferior characteristics by cross-fertilization.</p> <p>An unexpectedly large amount of cross-pollination has been found to take place in cotton through the agency of bees and other insects, causing diversity and deterioration of varieties. This shows that breeding work can not be combined with variety tests, and affords another reason why each cotton-growing community should limit itself to a single, adequately tested, locally adjusted variety.</p> <p>A considerable number of improved varieties and strains of Upland cotton have been developed and distributed to farmers in different parts of the cotton belt. Many other promising types are being selected and tested. Special attention is being given to the further improvement of the Texas big-boll type of Upland cotton, because of its superiority over other short-staple cottons.</p> <p>Many selections have been made in Texas to secure improved varieties of the big-boll type. Two uniform strains have been developed that have shown themselves superior to the now popular Triumph variety. After being tested in field plantings these stocks are being multiplied for the congressional seed distribution.</p> <p>Improved types of Upland long-staple cotton have also been developed and distributed, notably the Columbia cotton of South Carolina, originated from a single variation. Other long-staple varieties have been bred for northeastern Texas and Louisiana, earlier than old long-staple sorts that are being driven out of cultivation by the boll weevil. Experiments are being made with these new long-staple varieties in the Red River Valley of northeastern Texas and Louisiana to determine the practicability of continuing the production of long-staple cotton under boll-weevil conditions.</p>		
(4) Acclimatization and adaption of corn..... \$4,425.24	(4) Acclimatization and adaptation of corn..... \$4,425.24	(4) Acclimatization and adaptation of corn..... \$4,425.24
<p>This work includes the study of the adaptive characters of the varieties of corn indigenous in Mexico, Central America, and South America, and of the effects of new and changed conditions on the varieties. The objects are to acclimatize the promising varieties in the different regions of the United States where their natural characteristics fit them for the local conditions, and to learn the effects of change of seed; also to secure varieties adapted to our tropical territory and to the subtropical Gulf regions and the semiarid West, where corn is not now grown or is a precarious crop.</p> <p>Results.—Many varieties of corn have been found in Central and South America and in Asia with pronounced adaptations to conditions outside of the present range of culture in the United States, and furnish valuable material for breeding. Of special interest is a variety from Shanghai, China, which has the silks of the young ear protected by the base of the leaf. The leaf sheath and blade are held in a nearly vertical position and serve as a sheltered receptacle for pollen, into which the silks are pushed and become fertilized without being exposed to the drying of the wind, which in ordinary varieties often results in the drying of the silks before fertilization can take place. Crosses of this variety with United States varieties have proved more productive than either parent.</p> <p>High-yielding northern varieties have been found unsuited to Texas conditions for the reason that the ears are not sufficiently protected by the husks. Experiments have shown that hybrids between these and Texas varieties have the ears nearly as well protected as the Texas varieties while still retaining the high-yielding properties of the northern parent.</p>		
(5) Acclimatization and adaptation of tropical plants..... 1,467.51	(5) Acclimatization and adaptation of tropical plants..... 1,500.00	(5) Acclimatization and adaptation of tropical plants..... 1,500.00
<p>In connection with the investigations of tropical varieties of cotton and corn superior varieties of several other tropical plants are being studied, to determine the possibilities of acclimatization and adaptation to conditions found in the United States or our insular possessions; also to study the relations between breeding and acclimatization, and the effects of different methods of breeding and propagation upon the agricultural value of varieties. The settlements that are now being made in the warm irrigated districts of southern Texas,</p>		

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.	ACCLIMATIZATION AND ADAPTATION OF CROP PLANTS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>Arizona, and California afford conditions where many tropical crop plants and ornamentals can probably be grown, and information regarding the acclimatization of such plants is much needed.</p> <p><i>Results.</i>—The feasibility of much larger production of coffee in Porto Rico has been ascertained. The determination of the status of rubber culture in Mexico and Central America has enabled the department to give warning to investors and to save to the American public very large amounts of money that would otherwise have been lost. Superior varieties of cacao, the avocado, chayote, and other tropical crop plants have been discovered in Central America which are suitable for introduction into the United States and the insular possessions. New species of economic palms have been discovered in Central America, some worthy of cultivation for food and other practical purposes, and others suited for household cultivation as ornamentals and capable of being bred in the United States and Porto Rico instead of being imported from the East Indies.</p> <p>The acclimatization experiments have thrown new light upon several important problems of breeding. A general study of the physiological effects of different methods of breeding upon the vigor and fertility of plants has been published.</p> <p>The existence of two types of branches has been established in several of the more important tropical crop plants, cotton, coffee, cacao, the Central American rubber tree, and the banana, and a bulletin has been prepared describing these facts and pointing out their agricultural applications.</p> <p>The habits of a wild type of wheat have been studied in Palestine, and adaptations for cross-fertilization have been found, as well as indications of crossing and of disease resistance among the very diverse primitive types of wheat cultivated in that country, facts of obvious biological and agricultural interest in their bearing upon the acclimatization and improvement of varieties of this crop.</p>		
DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS.	DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS.	DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS.
(Rodney H. True, physiologist in charge.)	(Rodney H. True, physiologist in charge.)	(Rodney H. True, physiologist in charge.)
Salaries, statutory..... \$4,970.00	Salaries, statutory..... \$6,740.00	Salaries, statutory..... \$7,280.00
Salaries, lump fund..... 32,055.17	Salaries, lump fund..... 35,034.50	Salaries, lump fund..... 36,954.50
Miscellaneous expenses and supplies..... 6,601.96	Miscellaneous expenses and supplies..... 1,985.50	Miscellaneous expenses and supplies..... 4,625.50
Traveling and field expenses..... 4,370.77	Traveling and field expenses..... 5,950.00	Traveling and field expenses..... 7,850.00
Total expenditures..... 47,997.90	Total..... 49,710.00	Total..... 56,710.00
Outstanding liabilities..... 849.03		
Total expenditures and liabilities..... 48,846.93		
(1) Administrative and supervisory work..... 1 8,495.21	(1) Administrative and supervisory work..... 2 9,459.40	(1) Administrative and supervisory work..... 3 9,459.40
<p>This project includes the planning and general supervision of all of the work on drug, poisonous, and other plants, etc.; the general office and laboratory work connected with the field investigations; and other supervisory or routine features of the work.</p> <p><i>Results.</i>—The results under this project are reflected in the progress and results noted under all of the other projects described in the following paragraphs:</p>		
(2) Testing gardens for drug and related plants..... 5,835.89	(2) Testing gardens for drug and related plants..... 5,507.00	(3) Testing gardens for drug and related plants..... 6,507.00
<p>These gardens are located at Arlington, Va., Ebenezer, S. C., Orange City, Fla., and Madison, Wis. The objects are handling foreign and domestic drug plants, both wild and cultivated, and to make careful observations on the methods of propagation, culture, curing, etc. Tests to show whether the amount of active principle present in the plants can be increased by fertilization are under way. In order to permit the necessary extraction and distillation of the products grown experimentally, laboratory work is conducted in connection with the gardens. The work also includes demonstrations of the culture of the most promising drug crops, peppers, etc., with a view to the encouragement of their production on a commercial scale.</p> <p><i>Results.</i>—It has been shown that many valuable drug crops can be produced in this country. The United States sends abroad each year from ten to fifteen million dollars for the purchase of plant drugs, many of which can be grown at home. Methods of cultivating and growing many important drugs now</p>		<p>The increase of \$1,000 is desired to cover the expenses arising from the extension of the work, especially at Arlington, Va., and Madison, Wis., and to meet in part the expense of making a horticultural study of the problems involved in the adaptation of many promising drug crops; also to undertake work in the arid Southwest, permitting investigation of an important group of economic products derived at present from Asia Minor and the Upper Nile country.</p>

1 Includes statutory salaries amounting to \$4,970.

2 Includes statutory salaries amounting to \$6,740.

3 Includes statutory salaries amounting to \$7,280.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Continued.</b> <p>imported have been worked out, and important native drug-producing plants threatened with extermination have been brought under cultivation—for example, goldenseal, cascara, ginseng, and others. Publications on the cultivation of goldenseal, ginseng, and peppermint have been issued, and reports on growing cascara sagrada and <i>Cannabis indica</i> have been prepared for publication. As a result of these investigations, a marked interest in drug-plant growing is developing among the large crude drug dealers. The growing on a commercial scale of several drug plants has been accomplished, and several tons of important sorts have been sold, demonstrating the commercial possibilities of South Carolina in drug production. An increased number of kinds of plants have been under study. The work now includes 150 different species. A number of publications which have found a wide field of usefulness have resulted from this work. These publications are meeting a great and continued demand for information regarding the native drug plants.</p> <p>The paprika experiment in South Carolina has been brought to the stage where the product finds a ready market. About 60,000 pounds of dried pods were produced last season by our cooperators under the direction of the department's representative, at a good profit, and with the early publication of a bulletin upon the subject, this phase of the paprika work will be complete, with the result that a small but profitable industry for favorable localities in the Southern States has been established.</p> <p>(3) Establishment of the camphor industry..... \$2,281.11</p> <p>The work consists of field tests of the grown camphor tree with reference to camphor distribution, propagation, and cultivation, and the working out of the best methods of growing camphor trees and of utilizing the product. Tests have shown that camphor obtained from American trees is identical with that imported from the Orient. It is believed that camphor trees will flourish over a large part of the area from which frost has driven the orange, and that they will produce camphor in commercial quantities.</p> <p><i>Results.</i>—The commercial planting of camphor in Florida continues to progress. It is believed that the camphor industry has now been established on a firm basis. The department's experiment is being aimed primarily at improvement of the stock through careful selection of the seedlings, and improved methods of cultivation, handling, and production. The preliminary work has consisted largely in starting young stock from parent trees carefully selected for camphor content. To obtain this result, samples of material were distilled from well-shaped, healthy, seed-bearing trees having a good rate of growth. Where the gum content was found to be high, seeds of these trees were obtained for planting. Through this work sufficient seedlings of high-yielding camphor are now available to plant the entire experimental area of 55 acres at Orange City, Fla., bringing the experiment one step nearer the final practical test of camphor making. The cultural work has been accompanied by continued improvement of types of factory apparatus, in order that the equipment for handling the camphor may be worked out by the time the stock is ready for use.</p> <p>(4) Volatile oil and perfumery plant investigations..... 1,998.69</p> <p>This work consists of a study of American-grown plants yielding volatile oils, with reference to their utilization in the manufacture of perfumery, soaps, etc. These materials are now in large part imported. Both wild and cultivated plants are now under test, and laboratory distillations to isolate the fragrant principles are made.</p> <p><i>Results.</i>—In this work, which was only undertaken in 1908, some fine products have already been produced which should find a ready market demand if produced commercially, such as the oil of <i>Mentha citrata</i>, <i>Monarda fistulosa</i>, and <i>M. punctata</i>. A large variety of plants have been worked with on a small scale. Among others the Andropogons, yielding the grass oils of India, may be mentioned. A number of these plants give promise of yielding very valuable results when worked out on a commercial basis. Valuable substances, commanding high prices in the market, have been found in the oils distilled from the white sage and black sage, common weeds of the Great Plains region. An oil has been isolated from fireweed which is likely to be valuable in the paint and varnish industry in the same way that turpentine is valuable. Physiological studies of the conditions governing oil formation are being made. Cultural tests of foreign perfumery plants are under way at the various drug-plant testing gardens.</p>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b> <p>(3) Establishment of the camphor industry..... \$2,180.00</p> <p>(4) Volatile oil and perfumery plant investigations..... 1,860.00</p>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b> <p>(3) Establishment of the camphor industry..... \$3,180.00</p> <p>The increase of \$1,000 is desired as the experiment has now reached a stage where it is seriously hampered by lack of sufficient funds to pay for the labor necessary for the proper care of the increased acreage of camphor seedlings. The development of the experimental work on camphor production, also, requires additional funds for apparatus and laboratory facilities.</p> <p>(5) Volatile oil and perfumery plant investigations..... 2,360.00</p> <p>The increase of \$500 is desired to provide for the extension of the facilities for tests of promising oil-producing crops on a commercial scale. This small provision covers the additional cost of agricultural facilities and labor which will make it possible to determine practically on a small scale the commercial possibilities in a number of plants, which give promise of considerable value for cultivation in this country.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Continued.</b>  <p>In connection with the camphor work in Florida a large number of plants yielding valuable perfumery products have been secured and partially tested, as, for instance, lemon grass, vetiver, etc. The prospect seems excellent for developing crop silks likely to be of great value to Florida.</p> <p>A bulletin on perfumery plants, supplying a general and urgent demand for information on this subject, has just been issued. As a result of an investigation of the oils from peach, apricot, and prune kernels occurring as waste material in connection with the canning industry, it was found that these oils are practically identical with the oils obtained from sweet and bitter almonds, and a bulletin has been issued on the subject, pointing out a source of profit in this waste material.</p> <p>(5) American hop investigations..... \$2,585.70</p> <p>This work is a study of the relation between the quality of hops and methods of growing, curing, and handling the product, and the working out of the conditions most favorable to the development of desirable qualities and constituents. The object is to ascertain to what extent the good and bad qualities of American hops are due to methods of growing, curing, etc.</p> <p><i>Results.</i>—A study of hop drying as practiced in California has been made, and the importance of curing hops at low temperatures has been pointed out. The source of small amounts of arsenic occasionally found in both foreign and domestic hops has been demonstrated to be found in the impure sulphurs used in sulphuring hops, and it has been shown that little arsenic is absorbed by the plant, even though the soil is watered frequently with arsenic solutions of considerable concentration. This conclusion is one of great importance to the hop industry, and seems to make the cure of this long-standing trouble easily possible. It may also have an important bearing on the sulphuring of fruits and other products used in foods or drinks.</p> <p>As a result of detailed studies of field conditions governing the yield of hops, methods of planting and cultivation have been worked out which promise to increase the yield with the present acreage from 5 to 65 per cent according to the method of cultivation at present in use, and large plantings are now being made on the basis of the improvements suggested as the result of these investigations.</p> <p>Study of the chaotic conditions resulting from present methods of hop valuation has shown where these methods are defective, and also how they may result in unmerited discriminations against American hops. To aid in bringing about the adoption of more accurate and rational standards of hop valuation, through the dissemination of information on the subject, a circular has been issued.</p> <p>About 2,300 seedlings are now planted out under field conditions and will form the basis of the selection work. Already a number of distinct types have been recognized, some of which are very promising in respect of yield, quality, and disease resistance. Over 300 plants, comprising a number of varieties, are now under observation, the object being a study of varietal characteristics and the determination of the types best suited for cultivation.</p> <p>(6) Tanning and dye-plant investigations..... 1,171.89</p> <p>This work consists of experiments with promising tannin crops, with a view to their cultivation as farm products. With the passing of the forests the tanning industry has found increasing difficulty in obtaining a supply of tanning materials, and this has resulted in an increasing importation of extracts, barks, etc. The production of these materials at home is worthy of encouragement. This project also includes plants used in the manufacture of dyes, because of their intimate relation with the subject of tannin plants.</p> <p><i>Results.</i>—A preliminary study has shown that there are unused sources of tannin existing in neglected products. The tanning qualities of these substances are being studied in cooperation with practical tanners. Plans are being made for the experimental cultivation of tannin-yielding crops. Analyses have been made of 26 samples of tannin material from American plants and a few samples of Philippine material. Small samples of leather were made from most of the samples tested. There is promise that certain forms of American sumac may by judicious selection and cultivation yield a marketable product.</p> <p>(7) Physiological testing of plant drugs..... 317.80</p> <p>This work consists of laboratory tests of American-grown drug-plant products, to determine the amount of active principle present therein. The object is to ascertain by animal tests the value of American-grown <i>Cannabis indica</i>, <i>digitalis</i>, etc. Known doses are administered to animals to ascertain by the action on them the amount of active principle present. Requirements in the direction of laboratory investiga-</p>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b>  <p>(5) American hop investigations. \$2,910.00</p> <p>(6) Tanning and dye-plant investigations..... 1,220.00</p> <p>(7) Physiological testing of plant drugs..... 704.17</p>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b>  <p>(5) American hop investigations. \$3,910.00</p> <p>The increase of \$1,000 is desired to provide for the establishment of experimental areas of hops in different parts of the hop country, and detailed studies of these areas with the object of working out more effective methods of handling the hop plants; and also to carry on the increased hop-breeding work which was begun with the object of developing new and superior varieties.</p> <p>(6) Tanning and dye-plant investigations..... 1,220.00</p> <p>(7) Physiological testing of plant drugs..... 1,704.17</p> <p>The increase of \$1,000 is desired to meet the pressing need of a slight increase in laboratory equipment in order to handle the increased volume of work necessitated in the laboratory.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Continued.	DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.	DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.
<p>tions derived from the cultivation of drug and related economic plants have made it necessary to broaden the scope of the work of drug-plant testing so as to meet this need. Besides the physiological testing of drug plants it has been found necessary to take up the actual determination of the active principle content of drug-plant material from the experiments, as well as laboratory investigations of related economic plants requiring the equipment of the drug-plant laboratory.</p> <p><i>Results.</i>—The work done under this project is largely incidental to the other projects.</p>		
(8) Lemon investigations..... \$2,388.50	(8) Lemon investigations..... \$2,600.00	(8) Lemon investigations..... \$2,000.00
<p>This work includes a study of the conditions under which lemons are grown and prepared for market, with special reference to methods of curing, in order to ascertain the cause of the poor keeping quality of the American product and to remove it if possible; the working out of methods of utilizing lemon waste products, such as the formation of citric acid from distilled fruits.</p> <p><i>Results.</i>—Fruit handled in various ways has been shipped from California to Washington, D. C., and held for keeping tests. Tree-ripened, tent-cured, and sweated fruits have had careful laboratory study and important facts have been learned therefrom. It seems probable that the cause of the deficient keeping quality of the American fruit is due in part to poor methods of handling, but to a great degree to the destructive action of fungi which attack the fruit. A bulletin on this and other points bearing on the methods of lemon sweating and curing has been published. A further study of the sweating process seems to show that gaseous products of imperfect combustion exercise an important influence in coloring the fruit, and a report on this subject has been submitted for publication.</p>		
(9) General plant physiological and fermentation investigations..... 6,434.32	(9) General plant physiological and fermentation investigations..... 6,098.60	(9) General plant physiological and fermentation investigations..... 6,098.60
<p>This work includes study of the significance and cause of operation of fermentative processes brought about by organisms, chiefly through their enzymes, as exemplified in technical problems such as the formation of alcohol; study of the deterioration of maize with special reference to the possible relation between the consumption of spoiled corn and the disease known as pellagra; study of the physiological causes underlying the poor keeping qualities of certain fruits and vegetables, such as American lemons, sweet potatoes, onions, etc., and means of storing these products with less risk; study, in cooperation with plant pathologists of the Bureau of Plant Industry, of physiological phenomena accompanying certain diseases of plants, such as the mosaic disease of tobacco, curly top of beets, and a wilt disease of cabbage and spinach; study of the inorganic food requirements of plants with special reference to the proper nutritive balance.</p> <p><i>Results.</i>—In these lines of work, which have been but recently organized, considerable progress has already been made in the perfection of methods of investigation, which promise to yield valuable results through the elucidation of physiological conditions underlying plant diseases affecting a number of important crops. A considerable volume of work on the cause of the poor keeping quality of American lemons, sweet potatoes, onions, etc., in storage is being carried on, and a large amount of information along this line is being accumulated.</p> <p>Numerous requests for analyses of samples of corn received from food inspectors and various people in the South, notably from asylum superintendents, emphasized the lack of available information on methods of detecting products of deterioration in spoiled corn, corn meal, etc. A study of such methods was therefore undertaken, and a bulletin on the subject, now in press, will make this information available, placing in the hands of asylum superintendents, health officers, and others interested practical tests for determining the fitness of given samples of corn and corn meal for human food. It is believed in Italy and Austria that pellagra is due to corn spoiled by the mold <i>Penicillium glaucum</i>. Inasmuch as discordant results have been obtained by various investigators, probably because they were working with different species of <i>Penicillium</i>, and a correct knowledge of the toxic members of this group is very important, a systematic study of the metabolism and toxicity of all the species, about 40 in number, has been undertaken.</p>		

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Continued.</b>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b>	<b>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</b>
(10) Poisonous-plant investigations..... \$15,114.79 This work includes field and laboratory investigations of plants poisonous to man and domesticated animals; study of the loco weeds, larkspurs, <i>Zygadenus</i> (death camas), lupines, and other poisonous plants of the western stock ranges; study of poisonous plants on the national-forest ranges, in cooperation with the Forest Service; study of poisonous fungi; and a wide variety of plants and plant products poisonous or suspected of being poisonous. <i>Results.</i> —It has been shown that the group of plants known as loco weeds are responsible for the loco disease in the region of the Great Plains. Work in the field has given a knowledge of the characteristics of the diseases in horses, cattle, and sheep, making it possible to distinguish loco disease from various other troubles which have been confused with it. Remedial treatment has been worked out, making it possible to save about three-fourths of such horses and cattle as can be treated frequently, and the information accumulated in these investigations has been thoroughly investigated in both field and laboratory, and reports upon this subject have been submitted for publication. A temporary experimental station has been maintained during the past two seasons at Mount Carbon, Colo., where a large number of feeding experiments with poisonous plants have been carried on, affording a considerable amount of valuable information on the toxicity of larkspurs, <i>Zygadenus</i> , lupines, and many other poisonous plants of the cattle ranges. A bulletin dealing with the poisonous effects of the larkspur and practical methods of treating larkspur poisoning under range conditions is in course of preparation. Appeals for help in dealing with stock poisoning in the national forests have been responded to as fully as the funds available would permit. The distribution of poisonous plants in these forests has been investigated, dangerous areas pointed out, and in some cases it has been possible to make definite recommendations in regard to the handling of the stock, which it is believed will materially reduce the losses. A large amount of laboratory work on loco weeds, <i>Zygadenus</i> , larkspurs, and many other poisonous plants is in progress, having for its object the determination of the toxicity of these plants and the isolation of the toxic principles. A number of alkaloids which have been obtained in these studies are now under investigation.	(10) Poisonous-plant investigations..... \$14,990.83	(10) Poisonous-plant investigations..... \$17,490.83 The increase of \$2,500 is desired to meet the increasing demands for help on poisonous-plant problems throughout the cattle-grazing States, where losses of stock may oftentimes reach such a high percentage in a given locality as to seriously jeopardize the cattle industry. In many cases these losses are attributed to plants which are under suspicion. To know the facts would be of the greatest practical importance to the cattlemen. In many cases it is possible, through an inspection of the range, to make recommendations by means of which dangerous poisonous-plant areas may be avoided, and it is believed that through a wider dissemination of the experience gained in dealing with these problems much loss of stock would be avoided. To meet this demand for an increased body of field work, together with the accompanying laboratory studies required for these investigations, a considerable increase in available funds will be necessary.
(11) Miscellaneous investigations of drug and related economic plants..... 2,223.03 This work includes miscellaneous investigations of drug and related economic plants not classified in the preceding projects; the compilation of information on native drug plants; experiments in the growing and manufacturing of tea on a commercial scale, chiefly in South Carolina; the devising of practical machinery for pruning and picking to reduce the cost of production, and the testing of improved methods of producing tea in the United States; also the improvement of the yield and quality of the tea leaf by selection, and various physiological studies of the changes due to fermentation, the relation of constituents to fragrance and aromatic properties, and studies of tea material at various stages of manufacture. <i>Results.</i> —The tea situation in South Carolina continues to be very promising. The production of tea has been satisfactory, and an increased demand for American tea absorbs the product. The cost of production is being reduced and the quality of the product is steadily improving without any diminution of the yield. A machine has been devised for pruning tea, which promises, when minor defects are corrected, to reduce the cost of pruning tea—now a hand process—to about one-fifth of the present cost. A tea-picking machine has also been planned, and while not yet in operation gives promise of solving another important problem connected with the tea industry of the United States. It has been demonstrated that tea will grow well in the proper situations in this country and will produce an abundant yield, and that this yield of leaf can be made into excellent tea. The agricultural and manufacturing aspects of the tea have been in a very great measure worked out. The problem of marketing is at present the chief unsettled point. It is believed that through the use of labor-saving machinery much can be done toward the development of an American tea industry.	(11) Miscellaneous investigations of drug and related economic plants..... 2,180.00	(11) Miscellaneous investigations of drug and related economic plants..... 2,180.00

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.																																																		
<div>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Continued.</div> <p>Considerable progress has been made in the experimental work in tea improvement. It has been shown that by a careful selection of stock for planting the yielding capacity of a tea field can be much increased. In the laboratory it has been shown that tea fermentation is due to the action of oxidizing enzymes or other constituents of the leaf, and that the tea aroma is not due to volatile oils, as was generally supposed, but to substances generated in the tea during factory processes.</p> <p>A series of bulletins on native drug plants has been undertaken to meet the widespread demand for information along this line. Three numbers of the series, dealing with the wild medicinal plants of the United States, American root drugs, and American medicinal barks, have already appeared, and a fourth, on American medicinal leaves, has been submitted for publication. A number of circulars on native drugs have also been issued, making available information on the collection of important native drugs, their preparation for the drug market, etc.</p> <div>AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS.</div> <p>(N. A. Cobb, technologist in charge.)</p> <table><tr><td>Salaries, statutory.....</td><td>\$380.00</td></tr><tr><td>Salaries, lump fund.....</td><td>14,092.27</td></tr><tr><td>Miscellaneous expenses and supplies.....</td><td>9,546.99</td></tr><tr><td>Traveling and field expenses.....</td><td>2,183.71</td></tr><tr><td>Total expenditures.....</td><td>26,202.97</td></tr><tr><td>Outstanding liabilities.....</td><td>2,765.78</td></tr><tr><td>Total expenditures and liabilities.....</td><td>28,968.75</td></tr></table> <div>PROJECTS.</div> <table><tr><td>(1) Agricultural technology investigations.....</td><td>1 7,707.91</td></tr><tr><td colspan="2"><p>This project has as its object the bringing together and coordination of the various lines of technological investigation carried on in the bureau. Laboratory facilities for conducting the work are now available, and for such problems as the improvement of agricultural apparatus, improved methods of grading and milling grain, and the improvement of methods of illustrating publications, various technological studies are being worked out, and the study of plant-infesting nematodes is being continued.</p><p>Results.—New methods have recently been devised for making a careful examination of the interior of the wheat grain. Apparatus for work in solar and artificial projection, in connection with lantern-slide and other illustrative work, has been developed, and the cost of illustrating has been reduced thereby. Methods for the comparative measurement of cotton staple, paper fibers, etc., are being developed, and the work is making good progress.</p></td></tr><tr><td>(2) Cotton standardization.....</td><td>11,425.10</td></tr><tr><td colspan="2"><p>This work has as its object the establishment of United States official grades for the commercial grading of cotton, and is conducted in accordance with recent legislation. Studies of methods of handling the cotton crop, as bearing upon the question of grades, are being made, with a view to bringing about improvements and lessening the damage to the product.</p><p>Results.—Substantial progress has been made toward the establishment of official grades of American cotton. In February, 1909, a committee of representative cotton men called together in Washington unanimously recommended the adoption of official grades, and submitted a set of types which in its opinion fairly represent the grades sought to be established. Preparations for the promulgation of these grades have gone steadily forward, and during the present year sets have been placed with the principal associations, organizations, exchanges, and agricultural colleges most interested in cotton. In addition to the sets thus placed, a larger number have been sold to cotton mills, cotton growers, and exchanges. Copies of the grades are now to be seen in all of the cotton States and in the chief milling centers. A method of vacuum storage has been devised whereby it is expected that future issues of the grades can be kept true to type. Studies are being made with reference to the future improvement of methods of grading and handling cotton.</p></td></tr></table>	Salaries, statutory.....	\$380.00	Salaries, lump fund.....	14,092.27	Miscellaneous expenses and supplies.....	9,546.99	Traveling and field expenses.....	2,183.71	Total expenditures.....	26,202.97	Outstanding liabilities.....	2,765.78	Total expenditures and liabilities.....	28,968.75	(1) Agricultural technology investigations.....	1 7,707.91	<p>This project has as its object the bringing together and coordination of the various lines of technological investigation carried on in the bureau. 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Methods for the comparative measurement of cotton staple, paper fibers, etc., are being developed, and the work is making good progress.</p>		(2) Cotton standardization.....	11,425.10	<p>This work has as its object the establishment of United States official grades for the commercial grading of cotton, and is conducted in accordance with recent legislation. Studies of methods of handling the cotton crop, as bearing upon the question of grades, are being made, with a view to bringing about improvements and lessening the damage to the product.</p> <p>Results.—Substantial progress has been made toward the establishment of official grades of American cotton. In February, 1909, a committee of representative cotton men called together in Washington unanimously recommended the adoption of official grades, and submitted a set of types which in its opinion fairly represent the grades sought to be established. Preparations for the promulgation of these grades have gone steadily forward, and during the present year sets have been placed with the principal associations, organizations, exchanges, and agricultural colleges most interested in cotton. In addition to the sets thus placed, a larger number have been sold to cotton mills, cotton growers, and exchanges. Copies of the grades are now to be seen in all of the cotton States and in the chief milling centers. A method of vacuum storage has been devised whereby it is expected that future issues of the grades can be kept true to type. Studies are being made with reference to the future improvement of methods of grading and handling cotton.</p>		<div>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</div> <div>AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS.</div> <p>(N. A. Cobb, technologist in charge.)</p> <table><tr><td>Salaries, statutory.....</td><td>\$1,320.00</td></tr><tr><td>Salaries, lump fund.....</td><td>25,878.00</td></tr><tr><td>Miscellaneous expenses and supplies.....</td><td>21,427.00</td></tr><tr><td>Traveling and field expenses.....</td><td>5,500.00</td></tr><tr><td>Total.....</td><td>54,125.00</td></tr></table> <div>PROJECTS.</div> <table><tr><td>(1) Agricultural technology investigations.....</td><td>2 7,820.00</td></tr><tr><td>(2) Cotton standardization.....</td><td>2 37,090.00</td></tr></table>	Salaries, statutory.....	\$1,320.00	Salaries, lump fund.....	25,878.00	Miscellaneous expenses and supplies.....	21,427.00	Traveling and field expenses.....	5,500.00	Total.....	54,125.00	(1) Agricultural technology investigations.....	2 7,820.00	(2) Cotton standardization.....	2 37,090.00	<div>DRUG PLANT, POISONOUS PLANT, AND GENERAL PHYSIOLOGICAL INVESTIGATIONS—Con.</div> <div>AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS.</div> <p>(N. A. Cobb, technologist in charge.)</p> <table><tr><td>Salaries, statutory.....</td><td>\$10,900.00</td></tr><tr><td>Salaries, lump fund.....</td><td>17,325.00</td></tr><tr><td>Miscellaneous expenses and supplies.....</td><td>22,500.00</td></tr><tr><td>Traveling and field expenses....</td><td>6,000.00</td></tr><tr><td>Total.....</td><td>56,725.00</td></tr></table> <div>PROJECTS.</div> <table><tr><td>(1) Agricultural technology investigations.....</td><td>2 7,820.00</td></tr><tr><td>(2) Cotton standardization.....</td><td>2 37,090.00</td></tr></table>	Salaries, statutory.....	\$10,900.00	Salaries, lump fund.....	17,325.00	Miscellaneous expenses and supplies.....	22,500.00	Traveling and field expenses....	6,000.00	Total.....	56,725.00	(1) Agricultural technology investigations.....	2 7,820.00	(2) Cotton standardization.....	2 37,090.00
Salaries, statutory.....	\$380.00																																																			
Salaries, lump fund.....	14,092.27																																																			
Miscellaneous expenses and supplies.....	9,546.99																																																			
Traveling and field expenses.....	2,183.71																																																			
Total expenditures.....	26,202.97																																																			
Outstanding liabilities.....	2,765.78																																																			
Total expenditures and liabilities.....	28,968.75																																																			
(1) Agricultural technology investigations.....	1 7,707.91																																																			
<p>This project has as its object the bringing together and coordination of the various lines of technological investigation carried on in the bureau. Laboratory facilities for conducting the work are now available, and for such problems as the improvement of agricultural apparatus, improved methods of grading and milling grain, and the improvement of methods of illustrating publications, various technological studies are being worked out, and the study of plant-infesting nematodes is being continued.</p> <p>Results.—New methods have recently been devised for making a careful examination of the interior of the wheat grain. Apparatus for work in solar and artificial projection, in connection with lantern-slide and other illustrative work, has been developed, and the cost of illustrating has been reduced thereby. Methods for the comparative measurement of cotton staple, paper fibers, etc., are being developed, and the work is making good progress.</p>																																																				
(2) Cotton standardization.....	11,425.10																																																			
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1 Includes statutory salaries amounting to \$380.

2 Includes statutory salary amounting to \$440.

3 Includes statutory salaries amounting to \$3,860.

4 Includes statutory salaries amounting to \$4,740.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS—Continued.	AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS—Continued.	AGRICULTURAL TECHNOLOGY, COTTON STANDARDIZATION, AND PAPER-PLANT INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(3) Paper-plant investigations..... \$9,835.74	(3) Paper-plant investigations.... <sup>1</sup> \$9,215.00	(3) Paper-plant investigations... <sup>2</sup> \$11,815.00
<p>The object of these investigations is to find material that may be substituted for wood in paper making. Three different classes of materials are being studied: (1) The wastes or by-products of our cultivated crops; (2) plants that may possibly be grown with profit, especially for paper making; (3) wild plants.</p> <p>Results.—Good progress has been made in the studies of cornstalks, broom-corn stalks, rice straw, and numerous other materials. During the present season paper of good quality has been made from fully half a dozen varieties of corn, three varieties of broom corn, from rice straw, Colorado River hemp, and other materials, both pure and in combination with cottonseed-hull fiber, spruce sulphite, and poplar soda pulps. Specially good results have been obtained from broom corn and rice straw, and promising results from cornstalks. In the conduct of this work cooperation is practiced with the Bureau of Chemistry, the Forest Service, and the Bureau of Standards, Department of Commerce and Labor, in the phases of the work in which these organizations are interested.</p>		<p>The estimated increase of \$2,600 is desired to make possible some commercial runs of rice straw and broom-corn stalks and to add to the list of materials under investigation the stalks of the saccharine and nonsaccharine sorghums, hemp in various conditions, both retted and unretted, and the tops of the promising zacaton grass from whose roots the rice root brushes of commerce are made; also to employ a practical papermaker to assist in the mechanical phases of the work.</p>
FIBER INVESTIGATIONS.	FIBER INVESTIGATIONS.	FIBER INVESTIGATIONS.
(Lyster H. Dewey, botanist in charge.)	(Lyster H. Dewey, botanist in charge.)	(Lyster H. Dewey, botanist in charge.)
Salaries, statutory..... 1,000.00	Salaries, statutory..... 1,200.00	Salaries, statutory..... 1,920.00
Salaries, lump fund..... 3,538.44	Salaries, lump fund..... 3,470.00	Salaries, lump fund..... 3,700.00
Miscellaneous expenses and supplies..... 949.97	Miscellaneous expenses and supplies..... 680.00	Miscellaneous expenses and supplies..... 1,230.00
Traveling and field expenses..... 810.81	Traveling and field expenses..... 1,500.00	Traveling and field expenses.... 1,000.00
Total..... 6,299.22	Total..... 6,850.00	Total..... 7,850.00
PROJECTS.	PROJECTS.	PROJECTS.
(1) Investigations of sisal, henequen, and allied fibers.... <sup>3</sup> 1,281.87	(1) Investigations of sisal, henequen, and allied fibers..... <sup>4</sup> 2,000.00	(1) Investigations of sisal, henequen, and allied fibers ..... <sup>6</sup> 2,000.00
<p>The object of this work is the production in our own territory of hard fibers suitable for binding twine and medium-grade cordage, now imported to the extent of about \$15,000,000 annually in addition to the manila fiber. These plants are most profitable in dry, rocky soils not suitable for cultivation or ordinary farm crops. The soil and climate in certain parts of Hawaii, Porto Rico, and the Florida Keys are suitable for sisal and allied plants.</p> <p>Results.—The experiments thus far give excellent promise of success. The sisal and henequen plants introduced by this department into Porto Rico are growing well there and have been set out in a plantation under the care of the Porto Rico Experiment Station. Plans are being made for cutting the first crop of leaves during the coming season. Encouraged by the results of the preliminary trials of the South Texas Garden, hard-fiber plants have been introduced in small numbers at three other points in the Southwest to determine their resistance to the winter climate. A cooperative experimental plantation has been started on the Florida Keys.</p>		
(2) Flax-fiber production..... <sup>5</sup> 704.41	(2) Flax-fiber production..... <sup>4</sup> 1,600.00	(2) Flax-fiber production..... <sup>5</sup> 2,000.00
<p>The object of this work is to increase the production of flax in this country to supply American linen mills, by means of the breeding of improved and uniform varieties of fiber flax, so as to avoid the necessity of importing all fiber flax seed; also to investigate and devise new and improved methods of handling the flax crop, preparing the fiber, or utilizing the waste or by-products.</p> <p>Results.—Work in the selection of seed for breeding of pedigree fiber flax has been begun and gives promise of valuable results. Improved methods for harvesting flax and preparing the fiber have been studied. In cooperation with the North Dakota Agricultural Experiment Station a farmers' bulletin on "Flax culture" has been published and distributed to growers. This has special reference to the production of flax for fiber purposes and the development of improved and disease-resistant varieties.</p> <p>In response to inquiries, hundreds of letters have been written advising correspondents to grow flax in view of the present shortage in supplies of flaxseed.</p>		<p>An increase of \$400 is desired in order to prosecute the field work more vigorously and to determine definitely why seed of fiber-flax varieties imported from Europe deteriorates when grown three generations or more in this country.</p>

<sup>1</sup> Includes statutory salary amounting to \$440. <sup>2</sup> Includes statutory salaries amounting to \$2,300. <sup>3</sup> Includes statutory salaries amounting to \$500. <sup>4</sup> Includes statutory salaries amounting to \$600. <sup>5</sup> Includes statutory salaries amounting to \$960.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FIBER INVESTIGATIONS—Continued.	FIBER INVESTIGATIONS—Continued.	FIBER INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(3) Hemp fiber production..... The object of this work is to increase the production of hemp in this country by means of cooperative experiments in the cultivation of hemp under the direction of this bureau in new localities, and the development of new or improved varieties, either by selection or from imported seed. Results.—The experiments in the cultivation of hemp in cooperation with the Wisconsin Agricultural Experiment Station have demonstrated that hemp of excellent quality can be grown in that State, and that it kills Canada thistle and checks the growth of quack grass. Similar results have been obtained in 1910 in Iowa, in cooperation with the Iowa Experiment Station. Experiments in Louisiana have demonstrated that hemp will not grow successfully on heavy clay soils there. An excellent improved variety has been secured from seven generations of seed selection in Minnesota. The limited and uncertain supply of hemp seed is found to be one of the serious obstacles to the expansion of the hemp industry, and plans are being made to remedy this difficulty.	(3) Hemp fiber production..... \$2,000.00	(3) Hemp fiber production..... \$2,250.00 An increase of \$250 is desired in order to extend the work of seed selection for the production of an improved uniform variety of hemp.
(4) Miscellaneous fiber investigations..... This work includes investigations of ramie, jute, ixtle, abaca, and other fibers; the testing and measuring of fibers; and the answering of correspondence regarding thousands of samples of fibers submitted for examination. The objects are to encourage the development of profitable fiber industries. Results.—Many prospective investors in ramie culture, misled by tales of promoters, have been furnished with information that has saved them from wasting time and money. Experiments made during the past year emphasize the fact that under new conditions young ramie plants will not survive a severe drought, and further, that if irrigated the furrow system must be used, as the plants are killed by flooding. Thousands of measurements have been made of the actual breaking strain of cotton fiber of different varieties, or grown under different conditions. Cotton breeders have thus been enabled to discard strains producing weak fiber and to select those with stronger lint. Valuable information has also been secured regarding the relative tensile strength of long fibers.	(4) Miscellaneous fiber investigations..... 1,050.00	(4) Miscellaneous fiber investigations..... 1,400.00 An increase of \$350 is desired to cover the additional time and attention which this work requires, and especially to make preliminary investigations regarding fibers that seem especially promising.
GRAIN STANDARDIZATION. (John D. Shanahan, technologist in charge.)	GRAIN STANDARDIZATION. (John D. Shanahan, technologist in charge.)	GRAIN STANDARDIZATION. (John D. Shanahan, technologist in charge.)
Salaries, statutory..... Salaries, lump-fund..... Miscellaneous expenses and supplies..... Traveling and field expenses..... Total expenditures..... Outstanding liabilities..... Total expenditures and liabilities.....	Salaries, statutory..... Salaries, lump-fund..... Miscellaneous expenses and supplies..... Traveling and field expenses..... Total.....	Salaries, statutory..... Salaries, lump-fund..... Miscellaneous expenses and supplies..... Traveling and field expenses..... Total.....
PROJECTS.	PROJECTS.	PROJECTS.
(1) General supervisory and office work..... This project includes the planning and direction of the field and laboratory work, the conducting of correspondence, and other details connected with the work of grain standardization. Results.—The results under this project are reflected in the progress and results noted under all of the other projects, described hereafter, and are being manifested in many ways, particularly in the increased activities of influential grain dealers toward bringing about more satisfactory conditions with reference to grain inspection and grading.	(1) General supervisory and office work..... 28,582.00	(1) General supervisory and office work..... 28,582.00
(2) Laboratory investigations in grain standardization, Washington, D. C..... This project includes general investigations and research bearing upon the methods of grain inspection, grading, storing, etc., with the object of improving these methods, of ascertaining the cause of deterioration in grain in storage and in transit, and of effecting an equitable and scientific method of grading grain; also to collect such information and data as will eventually enable the Department of Agriculture to establish United States standards for the commercial grades of grain. Results.—The special apparatus devised as a result of this work for the rapid determination of moisture in grain has been further developed so that it can be used in making tests of corn, wheat, oats, barley, rye, flax, kafir,	(2) Laboratory investigations in grain standardization, Washington, D. C..... 4,010.00	(2) Laboratory investigations in grain standardization, Washington, D. C..... 5,014.00 The estimated increase of \$1,000 is desired for the purpose of undertaking necessary investigations to determine the feeding and manufacturing value of the different commercial grades of corn and of corn which has become damaged during storage. The common practice under the present system of commercial grading is to mix such damaged corn with sound corn and dispose of the whole as

<sup>1</sup> Includes statutory salaries amounting to \$2,317.50.

<sup>2</sup> Includes statutory salaries amounting to \$3,300.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>GRAIN STANDARDIZATION—Continued.</p> <p>PROJECTS—continued.</p> <p>and other similar substances, with the result that much grain is being bought and sold on a percentage statement of moisture content, and the grain dealers' national association has adopted limits of moisture for the various commercial grades of corn. Upon request numerous demonstrations have been made before members of various grain dealers' associations, and a circular has been published giving detailed instructions for the use of the apparatus with the different grains. Progress has also been made on a method for determining the soundness of corn by means of a simple laboratory test.</p> <p>Special investigations have been carried on to show the relation between moisture content and shrinkage and deterioration in corn. A report has been published on "Moisture content and shrinkage in grain," and a preliminary report has also been issued on "The deterioration of corn in storage."</p> <p>(3) Trans-Atlantic grain transportation investigations.... \$1,504.46</p> <p>This work consists of the examination of cargoes, or of samples taken from cargoes, of American export grain shipped from various points in the United States upon arrival at European ports, with the object of securing definite information regarding the condition on arrival of American export grain and to determine the causes of deterioration of such grain during ocean transit. Such information is of great value in the general work of grain standardization and in devising means of improving the conditions of ocean transportation of grain.</p> <p><i>Results.</i>—The results of former investigations on the condition of American corn at the time of discharge at European ports have been published as Circular 55 of the Bureau of Plant Industry. During the past year detailed observations were made on two cargoes of export corn; one from New Orleans to Copenhagen, the other from Baltimore to Bremerhaven. The observations show that the quality and condition of the corn at the time of loading, the influence of the heat from the boiler rooms and the temperature of the water through which the vessel travels all have an important bearing on the condition of the corn at the time of discharge. In one of the cargoes the corn stored in the upper half of all three of the holds and practically all of the corn in the remaining hold which was adjacent to the boiler room was very severely damaged, the maximum temperatures of the corn in this part of the various holds ranging from 136° to 144° F., with the exception of two small lots which were in good condition at the time of loading, even though the corn immediately above and below was very badly discolored and had entirely lost its vitality.</p> <p>(4) Interstate grain transportation investigations..... 7,785.55</p> <p>The object of these investigations is to ascertain the changes which take place in grain during transit in railway cars and lake steamers. The factors of condition and quality, including the moisture and temperature of the grain, together with the relative humidity and temperature of the air at the time of loading and also at the time of discharge at destination, are being studied.</p> <p><i>Results.</i>—In cooperation with various grain shippers and with the Illinois Central, Baltimore &amp; Ohio, and Pennsylvania Railroads, special attention has been given to experimental shipments of corn from the central corn belt to New Orleans and Baltimore, observations being made at time of loading, en route, at destination, and while in storage at point of shipment and at destination.</p> <p>A large number of cars of corn have been examined at Chicago at time of loading and reexamined at Baltimore and New York to determine the changes which take place during transit. A special experimental shipment of 5 cars of corn, containing different percentages of moisture, from Baltimore to Chicago and return showed a natural shrinkage in transit varying from 220 to more than 2,700 pounds, depending on the moisture content and the degree of deterioration during the 21 days while the corn was in transit. The car showing the greatest loss in weight became sour and musty, reaching a temperature of 146° F.</p> <p>The results of these tests, which are being prepared for publication as a preliminary report on "The deterioration and shrinkage of corn in transit," show that with the present system of handling and grading corn, there is no assurance that it will be of equal grade when discharged at destination. These investigations are being continued with grain harvested, marketed, and stored under different conditions, with the object of determining what effect the different methods of handling have on commercial grades and values.</p>	<p>GRAIN STANDARDIZATION—Continued.</p> <p>PROJECTS—continued.</p> <p>(3) Trans-Atlantic grain transportation investigations..... \$1,941.00</p> <p>(4) Interstate grain transportation investigations..... 12,961.00</p>	<p>GRAIN STANDARDIZATION—Continued.</p> <p>PROJECTS—continued.</p> <p>"contract" grade, and it is desired to ascertain the amounts of the various kinds of damage which may be contained in the different commercial grades of grain.</p> <p>(3) Trans-Atlantic grain transportation investigations. \$3,941.00</p> <p>The estimated increase of \$2,000 is desired for extending the scope of the investigations and to carry on some definite experiments on different methods of handling and stowing corn for export, with a view to demonstrating what quality of corn can be exported under different conditions of stowage without danger of deterioration, and likewise to show how improved methods of stowage will lessen the degree of deterioration during transit.</p> <p>(4) Interstate grain transportation investigations..... 12,961.00</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
GRAIN STANDARDIZATION—Continued.	GRAIN STANDARDIZATION—Continued.	GRAIN STANDARDIZATION—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(5) Wheat milling and baking tests, Fargo, N. Dak..... \$3,763.85	(5) Commercial grain grading investigations..... \$10,269.00	(5) Commercial grain grading investigations..... \$12,269.00
	<p>Under this project, which is a reorganization of parts of projects numbered (5) to (11) in the preceding column, are being studied the various factors which are taken into consideration and the methods employed in the commercial grading of grain. These investigations are being carried on at the principal grain markets for the purpose of determining what factors can be expressed on a definite basis, and to develop methods for fixing values which can be readily used by the grain merchants and grain-inspection departments, with a view to bringing about a more uniform and satisfactory system and rules for grading grain on the basis of true milling and feeding values.</p>	<p>The estimated increase of \$2,000 is desired for a detailed study of the "dockage" in wheat, its bearing on grades, and the effect of different kinds of dockage on milling values, and also for the normal extension of the work now in progress.</p>
	<p><i>Results.</i>—In cooperation with the North Dakota Agricultural Experiment Station, milling and baking tests have been made from a large number of samples of wheat, representing the different classes, varieties, and commercial grades. Similar tests have also been made of wheats containing different percentages of damaged grain and other impurities, with a view of determining what percentage should be permissible on commercial grades.</p> <p>During the past year more than 15,000 samples have been analyzed in the principal grain markets where laboratories are being maintained. A large proportion of these analyses were made for grain merchants and grain-inspection departments, and in many cases the results of the analyses have determined the action taken in appeals and in the adjustment of disputes and claims between the grain merchants themselves. This work has likewise demonstrated the practicability of expressing some of the factors of grading on a definite basis, with the result that moisture limits have been established for the different grades of corn in many of the more important grain centers. A simple method has been developed for detecting sulphured oats and barley, which is an important factor in the grading of these grains. A manuscript has been submitted for publication showing the profits resulting from the "sulphuring" of oats and barley.</p>	
(6) Grain-standardization laboratory, Baltimore, Md..... 7,660.56	(6) Commercial grain-handling investigations..... 17,213.00	(6) Commercial grain-handling investigations..... 19,713.00
	<p>Under this project, which is also a reorganization of parts of projects numbered (5) to (11) in the preceding column, are included investigations of the handling and storing of grain on the farm, in the country elevators, by the transportation companies, and at the terminal markets, including the artificial drying and the deterioration and shrinkage of</p>	<p>The estimated increase of \$2,500 is desired for the normal extension of the work and especially to develop the investigations on the methods of handling grain on the farm and at country elevators, with the view of raising the standard of the quality of American grain and bringing about a condition whereby the farmer who markets good</p>

<sup>1</sup> Includes statutory salary, \$660.<sup>2</sup> Includes statutory salaries amounting to \$2,100.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
GRAIN STANDARDIZATION—Continued	GRAIN STANDARDIZATION—Continued.	GRAIN STANDARDIZATION—Continued.
PROJECTS—continued	PROJECTS—continued.	PROJECTS—continued.
	corn while in storage and during handling in the larger grain centers. <i>Results.</i> —In cooperation with grain exchanges and elevator companies, tests have been made with corn stored in different types of elevator bins, including a comparison of wooden and concrete bins. These tests, however, have not been carried far enough to justify the drawing of conclusions. Storage tests with grain of different percentages of moisture have shown that a high percentage of moisture is accompanied by rapid deterioration of the grain and that the rate of deterioration is more or less dependent on the general climatic conditions. Preliminary tests with artificially dried corn have shown that drying greatly improves its condition and keeping qualities without lessening its feeding value. Investigations have also shown that the present methods of handling grain on the farm are largely responsible for the dissatisfaction which exists among the grain trade in the handling and grading of grain. A circular has been published on "Handling wheat from field to mill," showing that wheat, if properly handled on the farm, will grade at least one grade higher when it reaches the primary market than if handled in the ordinary manner.	sound grain will receive a price equivalent to the value thereof rather than be compelled to accept a price equivalent only to the value of the average or poorer quality of grain marketed in his community.
(7) Grain-standardization laboratory, New York, N. Y.... \$2,133.25		
(8) Grain-standardization laboratory, Kansas City, Mo.... 3,883.02		
(9) Grain-standardization laboratory, Minneapolis, Minn.. 2,989.96		
(10) Grain-standardization laboratory, New Orleans, La.. 3,691.06		
(11) Grain-standardization laboratory, Chicago, Ill..... 4,834.22		
NOTE.—For a description of the scope of and of the results obtained under projects numbered (5) to (11) in this column, see projects numbered (5) and (6) in the next column. The work under the above headings has been reorganized under the headings described in the next column.		
PHYSICAL INVESTIGATIONS.	PHYSICAL INVESTIGATIONS.	PHYSICAL INVESTIGATIONS.
(Lyman J. Briggs, physicist in charge.)	(Lyman J. Briggs, physicist in charge.)	(Lyman J. Briggs, physicist in charge.)
Salaries, statutory..... \$600.00	Salaries, statutory..... \$840.00	Salaries, statutory..... \$2,220.00
Salaries, lump-fund..... 9,508.50	Salaries, lump-fund..... 9,690.00	Salaries, lump-fund..... 10,310.00
Miscellaneous expenses and supplies..... 4,212.53	Miscellaneous expenses and supplies..... 4,565.00	Miscellaneous expenses and supplies..... 4,565.00
Traveling and field expenses..... 625.31	Traveling and field expenses..... 1,000.00	Traveling and field expenses..... 1,500.00
Total expenditures..... 14,946.34	Total..... 16,095.00	Total..... 18,595.00
Outstanding liabilities..... 1,066.11		
Total expenditures and liabilities..... 16,012.45		
(1) Office and laboratory work..... <sup>1</sup> 4,308.69	(1) Office and laboratory work... <sup>2</sup> 7,055.00	(1) Office and laboratory work.. <sup>3</sup> 7,055.00
This project includes the routine laboratory work in connection with the physical investigations, the general office details and correspondence, and other similar features connected with the field work. <i>Results.</i> —The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs.		
2) Physical investigations in the dry farming regions.... 10,350.96	(2) Physical investigations in the dry farming regions..... 3,800.00	(2) Physical investigations in the dry farming regions..... 6,300.00
This work is carried on in cooperation with other offices of the bureau engaged in the investigation of crops grown on limited rainfall. The work consists of the study and comparison of the environmental conditions under which crops are produced in the different dry farming sections of the western United States, together with a study of the nutrition of crop plants under these conditions. These measurements are necessary for the proper interpretation and highest development of the rotation and cultivation experi-		The estimated increase of \$2,500 is desired for the purpose of determining, in cooperation with the Office of Dry Land Agriculture, how cultivation methods can be improved so as to give increased yields in dry farming regions.

<sup>1</sup> Includes statutory salaries amounting to \$600.<sup>2</sup> Includes statutory salaries amounting to \$840.<sup>3</sup> Includes statutory salaries amounting to \$840.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.  
OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
PHYSICAL INVESTIGATIONS—Continued. <p>ments and for determining what methods of farming are most efficient in conserving soil moisture and maintaining a proper supply of plant food in the soil.</p> <p>Results.—Special attention has been given to measuring accurately the amount and distribution of the rainfall and its penetration into the soil under different systems of cultivation. These measurements show that the loss of water through run-off constitutes one of the most serious problems with which the dry farmer has to deal. The attention of farmers has heretofore been directed mainly to preventing evaporation from the soil by means of a mulch. The soil conditions which prevent evaporation are not, however, those which are most favorable for absorbing the rainfall. The work has shown that the dust mulch is often so packed by a heavy rain that the loss from run-off is very great. Methods of handling the land so as to absorb all the rainfall, as well as to conserve it, will greatly extend dry farming operations. The important problem is being given earnest attention at the dry land experimental farms.</p>	PHYSICAL INVESTIGATIONS—Continued. <p>(3) Miscellaneous physical investigations.....</p>	PHYSICAL INVESTIGATIONS—Continued. <p>(3) Miscellaneous physical investigations.....</p>
<p>(2) Miscellaneous physical investigations.....</p> <p>The investigations under this heading are conducted both in the laboratory and in the field, and include the development of improved apparatus for determining the moisture content of grain; "electro-cultural" experiments, both in the greenhouse and in the field, to determine whether plant growth is affected by electrostatic fields of varying intensity, and if so, whether plants can be forced economically in this way; tobacco fertilizer experiments, to determine the cause of the greatly diminished yields of cigar-leaf tobacco in certain parts of the Connecticut Valley, and to devise a practical remedy; and investigations bearing on plant nutrition, having for their object the correction of unfavorable nutrient solutions in the soil which lead to the malnutrition of the plant.</p> <p>Results.—A method has been developed for the rapid determination of the moisture content of wheat samples. This method is based upon the resistance offered to the passage of an electric current through the grain. This resistance decreases very rapidly as the moisture content of the grain increases. The work so far has been confined mainly to wheat. A great deal of interest has been shown in the method by persons engaged in the shipment and storage of grain, and the applicability of the method to other grains and grain products will be tested.</p> <p>In the electro-cultural experiments the results have not shown any marked increase either in growth or quality due to the electrical treatment. Interested persons have consequently been advised, upon inquiry, to use caution in investing in expensive equipments which are claimed to give remarkable increases in yield and quality of vegetables and small fruits until further tests can be made by the department.</p> <p>In the tobacco fertilizer experiments, which have been completed, it was found that the trouble was due to a soil fungus which attacked the roots of the tobacco plants, and that this fungus attacks the tobacco only when the soil is alkaline. This alkaline condition is produced by the excessive use of carbonate of potash as fertilizer. The remedy found consists in avoiding carbonate of potash. In badly affected fields the use of acid phosphate to counteract the alkalinity of the soil was advised, and this treatment was followed by the growers with much success. In one field of 60 acres where this treatment was followed the yield was practically double that of the preceding year.</p>	<p>(3) Miscellaneous physical investigations.....</p> <p>SEED-TESTING LABORATORIES (Edgar Brown, botanist in charge.)</p> <p>Salaries, statutory..... Salaries, lump fund..... Miscellaneous expenses and supplies..... Traveling and field expenses..... Total expenditures..... Outstanding liabilities..... Total expenditures and liabilities.....</p> <p>PROJECTS. (1) General supervisory and office work.....</p>	<p>(3) Miscellaneous physical investigations.....</p> <p>SEED-TESTING LABORATORIES (Edgar Brown, botanist in charge.)</p> <p>Salaries, statutory..... Salaries, lump fund..... Miscellaneous expenses and supplies..... Traveling and field expenses..... Total.....</p> <p>PROJECTS. (1) General supervisory and office work.....</p>

<sup>1</sup> Includes statutory salaries amounting to \$1,380.  
<sup>2</sup> Includes statutory salaries amounting to \$3,331.39.  
<sup>3</sup> Includes statutory salaries amounting to \$3,680.  
<sup>4</sup> Includes statutory salaries amounting to \$4,520.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
SEED-TESTING LABORATORIES—Continued.	SEED-TESTING LABORATORIES—Continued.	SEED-TESTING LABORATORIES—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p><i>Results.</i>—The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs.</p> <p>(2) Seed-testing laboratories, Washington, D. C.; Lincoln, Nebr.; Columbia, Mo.; Corvallis, Oreg.; La Fayette, Ind.; and Raleigh, N. C. .... <sup>1</sup>\$13,077.16</p> <p>The work of these laboratories includes the testing for germination and mechanical purity of samples of seeds submitted for that purpose by farmers and seedsmen; the perfecting of seed-testing apparatus; and propaganda work with a view to popularizing seed testing. The field laboratories are maintained in cooperation with the State experiment stations, and in the case of the laboratory at Raleigh, N. C., with the North Carolina Department of Agriculture.</p> <p><i>Results.</i>—This work has done much to bring about general interest in better seeds, as shown by the larger number of samples received from farmers and seedsmen each year and by the fact that the demand for high-grade seeds increases annually. The laboratory at Lincoln, Nebr., has been in operation three years and the number of samples received and tested has increased approximately 50 per cent each year. In addition to the samples of forage plant seeds examined, some 14,000 single-ear germination tests of corn were made during the past year. At the Missouri laboratory the work has met with the same interest from farmers and seedsmen as in Nebraska. The Oregon laboratory has completed one season's work, and its importance, as judged by the interest manifested in it by the demands for seed testing, is comparable with that of the older laboratories. The laboratories in Indiana and North Carolina were opened in January, 1910, and are making good progress.</p> <p>(3) Adulterated seed investigations. .... 5,027.25</p> <p>This work is carried out in accordance with the law authorizing and directing the Secretary of Agriculture to obtain samples of grass and forage plant seeds in the open market, to test the same, and wherever the seeds are found to be adulterated to publish the results of the tests, together with the names of the dealers by whom the seeds so found to be adulterated were offered for sale.</p> <p><i>Results.</i>—At the time this work was begun there was a considerable amount of adulterated seed of red clover, alfalfa, orchard grass, and Kentucky bluegrass on the market, and the work so far has been confined to these kinds of seeds. The practice of adulteration has practically ceased in the case of red clover and alfalfa and the proportion of adulterated lots of orchard grass and Kentucky bluegrass has been reduced to a small percentage of what it was formerly.</p> <p>(4) Pure seed investigations. .... <sup>2</sup>5,902.76</p> <p>The object of this work is to study the impurities of seeds received at the laboratories, and to study the distinguishing characters of closely allied economic seeds in order to be able to disseminate information as to the identity of various classes of commercial seeds.</p> <p><i>Results.</i>—Sets of 100 kinds of weed seeds commonly found in commercial seeds, as well as sets of 100 kinds of economic plant seeds for the use of schools have been prepared and distributed. A number of experiment station workers and others have availed themselves of the opportunities offered by the seed testing laboratories to gain a practical knowledge of this work. Several papers have been published giving the results of seed studies and pointing out the way in which the seeds of closely related plants may be distinguished.</p> <p>(5) Seed vitality investigations. .... 2,579.34</p> <p>The object of this work is to determine the proper conditions for the germination of various seeds, as well as the conditions under which these seeds should be harvested, cured, and stored in order to insure the highest possible percentage of germination. A study is also made from time to time of the germination of commercial seeds found on the market.</p> <p><i>Results.</i>—Special attention has been given to the working out of methods of germination of the seeds belonging to the carrot family, as well as to the study of the practical value of hard seeds in the clover family. In line with the work of previous years, 3,845 packets of vegetable seeds offered for sale in the local markets have been tested for germination, the results corresponding closely with those of previous tests, with the exception that the average germination for the past year was slightly lower than that in other years.</p>	<p>(2) Seed-testing laboratories, Washington, D. C.; Lincoln, Nebr.; Columbia, Mo.; Corvallis, Oreg.; La Fayette, Ind.; and Raleigh, N. C. .... <sup>2</sup>\$14,078.40</p> <p>(3) Adulterated seed investigations. .... 4,795.00</p> <p>(4) Pure seed investigations. .... <sup>3</sup>4,210.00</p> <p>(5) Seed vitality investigations. .... 1,540.00</p>	<p>(2) Seed-testing laboratories, Washington, D. C.; Lincoln, Nebr.; Columbia, Mo.; Corvallis, Oreg.; La Fayette, Ind.; and Raleigh, N. C. .... <sup>2</sup>\$15,078.40</p> <p>The estimated increase of \$1,000 is desired for the purpose of securing necessary incidental equipment for the seed-testing work at the various laboratories, and also to provide for additional assistance required by the normal growth of the work.</p> <p>(3) Adulterated seed investigations. .... 4,795.00</p> <p>(4) Pure seed investigations. .... <sup>3</sup>4,710.00</p> <p>The estimated increase of \$500 is desired for the purchase of microscope and microtome equipment for the study of seed structure and also to provide for necessary assistance required by the normal growth of the work.</p> <p>(5) Seed vitality investigations. .... 2,540.00</p> <p>The estimated increase of \$1,000 is desired for the purchase of necessary equipment for investigational work on seed germination and also to provide for necessary assistance required by the normal growth of the work.</p>

<sup>1</sup> Includes statutory salaries amounting to \$950.<sup>2</sup> Includes statutory salary, \$840.<sup>3</sup> Includes statutory salary, \$600.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>GRAIN INVESTIGATIONS. (M. A. Carleton, cerealist in charge.)</p> <p>Salaries, statutory.....\$3,289.66 Salaries, lump fund.....39,721.02 Miscellaneous expenses and supplies.....5,231.83 Traveling and field expenses.....7,908.32 Total expenditures.....56,150.83 Outstanding liabilities.....985.26 Total expenditures and liabilities.....57,136.09</p> <p>(1) Administrative and supervisory work.....17,600.19 This project includes the planning and direction of the field work, the conduct of correspondence, all necessary traveling expenses in supervising the work, and other details connected with the investigations. Results.—The results under this project are reflected in the progress noted under all of the other projects, described in the following paragraphs.</p> <p>(2) Wheat investigations.....6,256.60 These investigations include the improvement of hard spring wheat for the Northwest; a continuation of the investigations of durum wheat; the extension of the winter wheat area; wheat investigations in the eastern United States; wheat experiments in California, and other problems connected with the wheat-growing industry. The project covers much breeding, adaptation, and introduction work with a view to the development of improved varieties and their introduction into extensive cultivation. Results.—The new grain crop, durum wheat, which produces annually over 50,000,000 bushels, is a direct result of this work. It has been established agriculturally for several years, and chief attention at the present time is being directed toward the growing of pure types of the best varieties. The Kubanka has been found to be the best variety for bread flour. The opposition to the wheat among millers has gradually diminished until now some of the best mills have been urging its further exploitation. Durum patent flour is now being advertised for the first time. The amount being used by the mills is rapidly increasing each year, while the export is about 20,000,000 bushels annually. A number of wheat hybrids have been well fixed and some of these are already found to be of considerable value. Greater earliness in the Turkey wheat has been secured by crossing with the Zimmerman, a well-known early variety. Another hybrid of much promise is one produced by crossing durum wheat upon the hard spring wheat, which appears to have the bread-making qualities of the common spring and the rust resistance of the durum. The area of Kharkov winter wheat has been extended to southern North Dakota and westward to the one hundredth meridian, this variety having been found to be considerably more resistant to drought than the Turkey and allied varieties. There are now probably more than 20,000,000 bushels of the Kharkov wheat produced annually. After several years' experiments the Chui wheat introduced from Turkestan has been found to be well adapted for use in California, and a number of successful milling tests have given it an excellent reputation among millers. These results will have the effect of practically revolutionizing the wheat industry in California, for the reason that heretofore, the native wheat being so starchy, it has been necessary to import from Kansas practically half of the wheat used by the mills, which is blended with the native wheat to furnish sufficient gluten. The excellent quality of the Chui wheat will make it unnecessary to import the Kansas wheat. A number of improved strains of hard spring wheat have been distributed through the Minnesota and North Dakota experiment stations. These include the well-known new varieties Minnesota 163, 169, and 188, and also the Ghirka spring, a very hardy drought-resistant sort of excellent quality introduced into South Dakota from eastern Russia.</p> <p>(3) Oat investigations.....3,841.30 The work includes the breeding and improvement of oats in the northern Mississippi Valley, the great oat-producing section of the United States, where adaptation and breeding work is being carried on in cooperation with several of the State experiment stations with the object of securing better yielding varieties of higher quality than those now generally grown. The work also includes the dissemination of the Swedish Select, Sixty Day, and other improved oat varieties; the development of hardy, high-yielding winter oats; and the extension of the winter oat area, as well as the selection of strains particularly adapted to oatmeal manufacture, and for other purposes.</p>	<p>GRAIN INVESTIGATIONS. (M. A. Carleton, cerealist in charge.)</p> <p>Salaries, statutory.....\$5,480.00 Salaries, lump fund.....38,244.00 Miscellaneous expenses and supplies.....5,831.00 Traveling and field expenses.....9,900.00 Total.....59,455.00</p> <p>(1) Administrative and supervisory work.....8,881.00 (2) Wheat investigations.....4,740.00 (3) Oat investigations.....3,600.00</p>	<p>GRAIN INVESTIGATIONS. (M. A. Carleton, cerealist in charge.)</p> <p>Salaries, statutory.....\$6,480.00 Salaries, lump fund.....42,000.00 Miscellaneous expenses and supplies.....8,475.00 Traveling and field expenses.....14,500.00 Total.....71,455.00</p> <p>(1) Administrative and supervisory work.....9,881.00 An estimated increase of \$1,000 is desired to provide for additional clerical help, made necessary by the normal growth of the work.</p> <p>(2) Wheat investigations.....5,740.00 The estimated increase of \$1,000 is desired for the purpose of inaugurating new experiments in the Southern and Eastern States.</p> <p>(3) Oat investigations.....5,000.00 The estimated increase of \$1,400 is desired for the purpose of starting experimental work in the Southern States, where winter oats is an especially important crop; for conducting oat-breeding work on the Arlington Experimental Farm; and for extending experimental work in Maine and Illinois.</p>

1 Includes statutory salaries amounting to \$3,289.66. 2 Includes statutory salaries amounting to \$5,480. 3 Includes statutory salaries amounting to \$6,480.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
GRAIN INVESTIGATIONS—Continued.	GRAIN INVESTIGATIONS—Continued.	GRAIN INVESTIGATIONS—Continued.
<p><i>Results.</i>—Several years' tests of the Sixty Day oat have demonstrated its value for the corn belt, where its earliness makes it particularly desirable. In the Northern States, the Swedish Select variety continues to grow in favor. Approximately 70,000,000 bushels of this oat are now produced annually, nearly 50,000,000 of which are grown in the State of Wisconsin alone. Improved strains of these varieties are being developed, several of which will soon be ready for distribution. The hybrids of Sixty Day and Burt seem particularly promising for the corn belt, while other hybrids promise much for the northern and irrigated sections. Some of the hardier winter strains are earlier and appear to be better yielders than any winter sorts now commonly grown.</p> <p>(4) Barley investigations..... \$3,518.20</p> <p>This work is carried on along four separate lines, viz, the general improvement of existing spring varieties of barley by means of selections and hybrids; the distribution of newly introduced varieties into favorable localities; the introduction and improvement of winter barley, and the securing of barleys adapted to high altitudes of the West.</p> <p><i>Results.</i>—Several important barley hybrids have been produced, two types of beardless and several forms both beardless and bull-less being most promising. These beardless types will make the growing of barley more popular, as the beards are objectionable to growers. Odessa, a Manchurian type of barley introduced and distributed by the department, has out-yielded the common varieties in the Northwest and will prove a valuable addition to the grain crops of that region.</p> <p>Winter barley has now become a well-established crop in Kansas and other States of the Middle West where only a few years ago it was not thought possible to grow this cereal. The advantage in its introduction is that it furnishes fall and winter pasturage and yields considerably more than spring barleys.</p> <p>The beardless and hull-less barleys, introduced from Asia and distributed throughout the Rocky Mountain States, have demonstrated their value as grain producers at high altitudes by maturing crops at 8,000 feet in Idaho and 9,800 feet in Colorado.</p> <p>(5) Grain sorghum investigations..... 3,314.81</p> <p>This work comprises adaptation tests of domestic and introduced varieties of sorghum to determine those best suited to particular sections; breeding and selection experiments to increase earliness, dwarfishness, hardiness, and productiveness; and cultural tests to ascertain the proper methods of planting and harvesting the crop. The object of the work is to establish the most productive, the most hardy, and especially the most drought-resistant grain sorghums in the semiarid regions of the West and in dry areas where other crops commonly fail because of drought.</p> <p><i>Results.</i>—Early strains of milo and kafir have been produced and are being matured at higher altitudes than has been previously possible. Dwarf strains of milo with erect heads have been obtained by selection and are now harvested with the grain header, thus doing away with slow heading. A similar strain of dwarf Blackhull kafir has been produced and is giving much better yields than the original larger strains under drought conditions. A new group of grain sorghums, the kowliangs of Manchuria and North China, has been adapted by selection for use as extra early and drought-resistant crops.</p> <p>(6) Rice investigations..... 7,891.75</p> <p>This work has for its objects the securing of data on the comparative yielding qualities of rices grown under the methods of cultivation now practiced within the rice belt; to devise methods of cultivation and irrigation that will increase the milling yields of rices; to determine the effect of environment on the composition of Carolina Gold, Honduras, and Japan rices; to select and breed varieties resistant to blast; to extend the rice area by developing varieties that can be grown without irrigation; and to determine the possibilities of rice production in California and on the marl and muck lands of southern Florida. The introduction of better yielding varieties and the improvement of cultural methods, as well as the control of diseases, are further objects of work.</p> <p><i>Results.</i>—In South Carolina selections were made from desirable rices showing resistance to blast, and more than 100 crosses were made from these varieties with Carolina Gold and Carolina White to secure strains of the last-named varieties which would resist the disease and at the same time preserve the shape and milling qualities of rices which have always had commercial value on the South Atlantic coast. These crosses and selections are being tested. Valuable facts concerning the life history of the fungus producing the</p>	<p>(4) Barley investigations..... \$4,820.00</p> <p>(5) Grain sorghum investigations..... 3,450.00</p> <p>(6) Rice investigations..... 8,000.00</p>	<p>(4) Barley investigations..... \$4,820.00</p> <p>(5) Grain sorghum investigations..... 4,950.00</p> <p>The estimated increase of \$1,500 is desired for the purpose of beginning a series of experiments with grain sorghums in Arizona and southern California.</p> <p>(6) Rice investigations..... 9,000.00</p> <p>The estimated increase of \$1,000 is desired to cover the expense of enlarging the experiments already begun in California, Texas, Arkansas, and Florida.</p>

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<div>GRAIN INVESTIGATIONS—Continued.</div> <p>blast have been collected and extended observations on the blooming of rice, so necessary in plant breeding, have also been made.</p> <p>In Louisiana, on a farm at Crowley cooperatively managed with the Louisiana Agricultural Experiment Station, and also in Texas and Arkansas, through co-operative experiments, the work has furnished important results on the yielding power of 300 varieties of rices. Valuable data on fertilizers for rices have also been collected.</p> <p>In California the results of the year's work show that with proper irrigation rice may be matured with heavy yields as early as August without rain. The work also indicates that flinty grains may be secured by proper methods of cultivation and irrigation.</p> <div><div>7) Cereal-disease investigations.....</div><div>This work includes the study of the life history of the rusts, smuts, scab, and miscellaneous diseases of grain and the working out of methods of controlling or preventing them. It is also the aim to obtain all knowledge possible concerning the conditions favorable or unfavorable to the diseases and all possible information which will reduce or eliminate losses from disease. The breeding of disease-resistant cereals in the various localities where diseases are prevalent or likely to occur is also a feature of the work.</div><div>Results.—Some of the principles of resistance of cereals to various diseases have been discovered. Rust-resistant varieties of wheat have been secured by crossing with the valuable hard spring wheats, and a foundation has been laid for the securing of rust-resistant wheats of good yielding quality which will be valuable for milling purposes.</div><div>Practical methods have been devised to prevent all the known smuts of small grains and the grain smut of sorghums. It is estimated that these smuts cause an annual loss of \$18,000,000 to \$20,000,000, and such a loss can now be largely averted.</div><div>The practicability of machines for treating seed is being studied. Such machinery will reduce the labor and cost of seed treatment to a minimum and will be of great aid in the ultimate eradication of smuts and the consequent increase in the profits of farmers.</div><div><div>(8) Grain experiments in the Texas Panhandle.....</div><div>This work consists chiefly of an experimental farm at Amarillo, Tex., the object of which is to determine the possibilities of the Panhandle region of Texas for grain cultivation and allied farming pursuits. The results, however, will be applicable to a considerably larger area. Although chief attention has been given to grains, work with other field crops is being carried on in cooperation with other offices of the Bureau of Plant Industry.</div><div>Results.—It has been shown that certain varieties of cereals can be successfully grown in this region, such as black winter emmer, Galgalos, and Fretes wheat, and some varieties of grain sorghums and kafir corns. The bureau has at its disposal in this high, semiarid district 120 acres of land, with the necessary buildings, donated by the business men of that section. The country is now largely devoted to grazing, but, largely as a result of these experiments, winter wheat is now grown to a considerable extent, and the hard winter wheat production of the Texas Panhandle now compares favorably with that of Kansas west of the 99th meridian. There is already much evidence of the good effect of this work upon general agriculture in the Texas Panhandle.</div><div><div>(9) Dry-land grain investigations.....</div><div>This work is conducted in the grain plains and intermountain districts of the West, on the dry-land stations operated by this and other offices of the bureau at Amarillo and Dalhart, Tex.; Akron, Colo.; Belle-fourche, S. Dak.; Judith Basin (Philbrook), Mont.; Dickinson and Williston, N. Dak.; and also at Highmore, S. Dak.; Nephi, Utah; and Moro, Oreg. The experiments at these points include variety testing; time, rate, and manner of seeding; selection and breeding for more drought-resistant and hardy types of cereals; and the distribution of improved varieties among farmers.</div><div>Results.—The experimental work thus far has emphasized the desirability of growing winter grains on the dry lands. It has been found that wherever winter varieties can be grown they outyield spring varieties from 20 to 50 per cent. Hardier and improved strains of winter grains have been developed and are being increased for distribution. As a result of these experiments, the winter-grain area is being rapidly extended. Experiments with winter wheats at Williston, N. Dak., this past year indicate that the hardier varieties will survive the winters in that section. Of the spring varieties, the durums continue to give the best results. In some localities prosos and other millets promise to become important crops, some varieties yielding between 30 and 40 bushels of grain to the acre.</div></div></div><div>\$4,300.35</div></div>	<div>GRAIN INVESTIGATIONS—Continued.</div> <div><div>(7) Cereal-disease investigations..</div><div>\$4,560.00</div></div> <div><div>(8) Grain experiments in the Texas Panhandle .....</div><div>5,220.00</div></div> <div><div>(9) Dry-land grain investigations.</div><div>13,464.00</div></div>	<div>GRAIN INVESTIGATIONS—Continued.</div> <div><div>(7) Cereal-disease investigations.</div><div>The estimated increase of \$1,500 is desired to cover the expense of a new series of experiments for the purpose of combating rice diseases in the Southern States.</div><div>\$6,060.00</div></div> <div><div>(8) Grain experiments in the Texas Panhandle.....</div><div>The estimated increase of \$1,200 is desired for the purpose of placing a scientific assistant in immediate charge of cereal variety testing at Amarillo, Tex., the work having developed to such an extent that it is impracticable for one man to look after the experiments at both Amarillo and Dalhart.</div><div>6,420.00</div></div> <div><div>(9) Dry-land grain investigations.....</div><div>13,464.00</div></div>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (§4 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><b>GRAIN INVESTIGATIONS—Continued.</b></p> <p>A new series of experiments with potatoes indicates that they are likely to become a profitable crop on the dry lands in a rotation system with small grains. In the older wheat growing sections, where farmers have been growing a mixture of many varieties, an effort is being made to eliminate the inferior types and to encourage the growing of pure strains of those varieties which have proved best suited to the dry-land areas of the country. Superior types in both yielding and milling qualities have already been developed and are now being placed in the hands of the farmers.</p> <p>A new station has been established at Moro, Oreg. Experiments are being conducted at this place for the purpose of devising a general farm-management scheme that will involve the growing of cultivated crops, especially legumes, in connection with wheat. The results secured will be applicable to a large area in north-eastern Oregon, eastern Washington, and northern Idaho, where the continuous cultivation of wheat has caused the soil to deteriorate, with a consequent decrease in yield and an increase in the cost of production.</p> <p>(10) Tests of crop rotation in cereal culture.....</p> <p>This work is largely incidental to the other projects, and consists of experiments with plats of various leguminous crops in alternation with cereals to determine the effect of the legumes on cereal production and on the soil.</p> <p><i>Results.</i>—The results obtained under this project are largely included in the statements of results under some of the other projects. Good results have been obtained, especially in California, showing the necessity for a thorough rotation of cereals with legumes to give better wheat yields and to help rid the fields of weeds.</p> <p>(11) Introduction of emmer and proso (miscellaneous grains).....</p> <p>The objects of these experiments are to introduce hardy crops, such as emmer, spelt, rye, proso, etc., in dry districts for use as stock food to take the place of oats and barley, so far as possible. The work has special reference to the securing of new and improved crops for the arid and semiarid regions.</p> <p><i>Results.</i>—Largely through the work of this department, emmer has now become quite an important crop in the dry districts, chiefly because of its drought-resistant qualities. Further work is being conducted to determine the best varieties, particularly good results having followed the introduction of the Black Winter variety, which undoubtedly is now one of the most important crops for stock food that can be grown on dry lands.</p> <p>Several varieties of proso or Russian millet were introduced into this country by the Department of Agriculture nine years ago. After a determination of the adaptation of these millets to the Great Plains area, recently further experiments have been begun to ascertain the comparative value of different sorts. This work has already resulted in the selection of the Black Voronezh variety as the most drought-resistant and otherwise best-adapted proso. Pure types of the different varieties are now being developed.</p>	<p><b>GRAIN INVESTIGATIONS—Continued.</b></p> <p>(10) Tests of crop rotation in cereal culture.....</p> <p>(11) Investigations of miscellaneous grains.....</p> <p>(12) Study of the effect of environment on composition of grains.....</p> <p>The objects of this work, which has been conducted in cooperation with the Bureau of Chemistry, are to determine the effects of soil and climate, fertilizers, etc., on cereal composition, and also the causes of deterioration in the quality of wheat grown in certain seasons or localities. The work also includes experiments in different methods of cultivation and in the application of different amounts of irrigation water, as well as chemical analyses of the grain obtained from these tests.</p> <p><i>Results.</i>—It has been found that an oversupply of water causes the production of "white grains" in durum wheat and of "yellow berry" in winter wheats. Too much water should not be applied in irrigation. This partly explains the deterioration of wheat in California. Some results showing striking effect of changes of soil and climate on the chemical composition of</p>	<p><b>GRAIN INVESTIGATIONS—Continued.</b></p> <p>(10) Tests of crop rotation in cereal culture.....</p> <p>The estimated increase of \$1,400 is desired for extra work in California, Oregon, the Rocky Mountain States, and eastern and southern United States.</p> <p>(11) Investigations of miscellaneous grains.....</p> <p>The estimated increase of \$720 is desired because of additional experiments with emmer and proso and some work with rye not heretofore included.</p> <p>(12) Study of the effect of environment on composition of grains.....</p> <p>The estimated increase of \$1,280 is desired for the purpose of resuming work at the Tennessee Station which had to be discontinued on account of lack of funds, also to continue the experiments already begun in California in connection with the deterioration of the wheat berry.</p>
\$1,889.65	\$1,000.00	\$2,400.00
1,408.50	1,000.00	1,720.00
	720.00	2,000.00

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
GRAIN INVESTIGATIONS—Continued,	GRAIN INVESTIGATIONS—Continued.	GRAIN INVESTIGATIONS—Continued.
	wheat kernels have also been obtained. These investigations are now being continued by the bureau of Chemistry under a cooperative arrangement between that bureau and the Bureau of Plant Industry.	
CORN INVESTIGATIONS.	CORN INVESTIGATIONS.	CORN INVESTIGATIONS.
(Charles P. Hartley, physiologist in charge.)	(Charles P. Hartley, physiologist in charge.)	(Charles P. Hartley, physiologist in charge.)
Salaries, statutory.....\$1,630.00	Salaries, statutory.....\$2,680.00	Salaries, statutory.....\$2,680.00
Salaries, lump fund.....7,238.44	Salaries, lump fund.....7,150.00	Salaries, lump fund.....11,150.00
Miscellaneous expenses and supplies.....1,768.49	Miscellaneous expenses and supplies.....3,200.00	Miscellaneous expenses and supplies.....3,200.00
Traveling and field expenses.....3,954.16	Traveling and field expenses.....2,000.00	Traveling and field expenses....3,000.00
Total expenditures.....14,591.09	Total.....15,030.00	Total.....20,030.00
Outstanding liabilities.....328.42		
Total expenditures and liabilities.....14,919.51		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Office and laboratory work..... <sup>1</sup> 1,814.57	(1) Office and laboratory work... <sup>2</sup> 3,358.00	(1) Office and laboratory work.. <sup>3</sup> 3,358.00
This project covers expenses incident to the office and laboratory in Washington, D. C., such as equipment and supplies for correspondence, publications, experimental records, laboratory experiments, and the care and proper preservation of seed corn assembled at Washington and there classified during the winter months for planting experiments throughout the country. Results.—This equipment assists in meeting the demands made by correspondence and otherwise for observations and proof of results, illustrations of experiments, specimens of different kinds and strains of corn that have proved most profitable in various localities, etc. Card indexes are maintained of sources of good seed corn and of the histories of improved varieties. The results under this project are also reflected in the progress noted under all of the other projects described in the following paragraphs.		
(2) Development and acclimatization of higher yielding strains of corn.....5,826.13	(2) Development and acclimatization of higher yielding strains of corn..... <sup>6</sup> 6,076.00	(2) Development and acclimatization of higher yielding strains of corn..... <sup>7</sup> 7,076.00
This work consists of the breeding and selection of strains of corn by the best known practical methods and the adaptation of these strains to localities greatly in need of good varieties. The strains are being improved, especially in productiveness and uniformity. The object of the work is to place in the hands of corn producers strains of corn that can be grown with greater profit than those now used, and to encourage the development of improved strains of corn on the farm. Results.—At the points where this project has been in operation for five years or more the strains of corn improved by the Department of Agriculture are preferred, and the average yields per acre in the localities have been considerably increased. While these strains of corn have responded by yielding larger and better crops and have been adopted by many farmers, a still greater good to the communities comes from the general stimulation given to corn improvement. The farmers of the communities in which this work is progressing now realize its importance and the great benefit to the country that would result from its extension.		The estimated increase of \$1,000 is desired for the normal extension of this work into localities greatly in need of corn improvement work.
(3) Investigations of methods of corn culture.....3,210.17	(3) Investigations of methods of corn culture.....2,152.00	(3) Investigations of methods of corn culture.....3,210.17
The work under this project embraces the preparation of the soil for corn, including cover crops, crop rotation, implements and methods of breaking and preparing land and of planting, cultivating, cutting, husking, shredding, and storing of the corn crop. This work has for its object the determination for the farmer's benefit of methods and implements of growing corn most profitably under different conditions of climate and soil. The corn crop, even when neglected, has yielded so bountifully that its requirements for maximum yields have received much less investigation than have the requirements of tobacco, sugar beets, and other field crops. Results.—Improved implements for preparing the land, planting, cultivating, and harvesting have been introduced into different localities, to the very great advantage of the farmers, who were not in position to know of such implements and their value. Cover crops and methods of rotation for better corn yields, better methods of planting, cultivating, and harvesting have been made the subject of demonstration among corn growers.		The estimated increase of \$1,000 is desired for the natural development of the work, with special reference to ascertaining the facts regarding the fundamental physical and nutritive requirements of corn, upon which proper cultural methods rest.

<sup>1</sup> Includes statutory salaries amounting to \$1,630.

<sup>2</sup> Includes statutory salaries amounting to \$1,840

<sup>3</sup> Includes statutory salary, \$840.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>CORN INVESTIGATIONS—Continued.</b>	<b>CORN INVESTIGATIONS—Continued.</b>	<b>CORN INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p>(4) Demonstrations of seed-corn selection, preservation, etc. \$2,369.61</p> <p>This project consists of tests and demonstrations of the best and most profitable methods of seed-corn selection, drying, and preservation. The best time to select seed corn and the best practicable means of preserving it must be determined for different sections. In some sections hard fall freezes occurring before seed corn is naturally dry are injurious, and in other sections warm, humid winters or insect depredations do equal harm. In order to adapt strains to different localities, means of well preserving the seed must be worked out, so that home-grown seed can each year be planted.</p> <p><i>Results.</i>—Practical and economical means of overcoming various combinations of influences injurious to seed corn have been worked out and are being tested. Experiments conducted by the department have proved that carefully dried and well preserved seed will in some seasons yield from 7 to 18 bushels more per acre than the same seed left to endure corn-crib conditions. It has also been proved that in some cases by poor preservation the yielding power of seed is reduced without reducing the germinating power. It may germinate and give a perfect stand of stalks but yield considerably less than it would have yielded if well preserved. It has been conclusively demonstrated that a seed-corn house constructed at Piketon, Ohio, at a cost of \$500 resulted in a 2,500-bushel increase in the 1910 corn crop of the farm.</p> <p>Experiments indicate that considerable loss sustained by damage to corn from weevils and moths could be avoided by an earlier harvesting of the crop than is commonly practiced in sections where these insects are most prevalent and by storing the corn in buildings better adapted to fumigation purposes than those commonly used.</p>	<p>(4) Demonstrations of seed-corn selection, preservation, etc. \$1,298.00</p>	<p>(4) Demonstrations of seed-corn selection, preservation, etc. \$1,298.00</p>
<p>(5) Investigations of the effects of heredity and environment on corn. 988.43</p> <p>The object of this work is the determination of the fundamental principles governing corn variations and the best practical methods of breeding higher yielding strains. The yielding power, as influenced by crossbreeding, close breeding, and inbreeding, is receiving attention in connection with the variations due to environment and changes of environment. Varieties with special adaptation, such as drought resistance, are imported, acclimatized, crossbred, or selected in order to obtain profitable varieties for localities in which our standard varieties are unproductive.</p> <p><i>Results.</i>—Each year's tests demonstrate the superiority of acclimatized strains that have undergone judicious selection for increased yields, and that present knowledge is insufficient to justify recommending to farmers the crossing of varieties of corn. Experiments are being conducted to determine the conditions, varieties, and methods whereby crossbreeding and the use of first-generation crosses can be profitably pursued. It has been shown that the tendency to produce suckers is hereditary and can be controlled by proper methods of seed selection; also that the pollen produced by a sucker is identical with the pollen of the main stalk to which the sucker is attached. Experiments further show that the various ears of a corn plant similarly pollinated are of equal value for seed. It has also been demonstrated that high-yielding power, stalk characters, and ear characters are hereditary.</p>	<p>(5) Investigations of the effects of heredity and environment on corn. 1,268.00</p>	<p>(5) Investigations of the effects of heredity and environment on corn. 1,768.00</p> <p>The estimated increase of \$500 is desired for the normal growth of the work under this project.</p>
<p>(6) Miscellaneous corn investigations. 710.60</p> <p>Under this heading are grouped various projects dealing especially with sweet corn and broom corn. The object of the work with sweet corn is to bring about the increased production and use of improved varieties of sweet corn for both canning and table purposes. The objects of the work on broom corn are the improvement of the crop and its adaptation to dry sections, as well as to furnish growers with much needed information regarding varieties, methods of culture, harvesting, grading, and marketing.</p> <p><i>Results.</i>—In the work with sweet corn it has been demonstrated that by the isolation of the seed plats from all other corn, careful attention to seed-corn selection, and proper drying and preservation of the seed, canners and farmers can produce their own supply of sweet-corn seed and make unnecessary the purchase of large supplies of seed every year.</p> <p>Cooperative work conducted with a number of corn-canning factories has convinced all concerned that better and larger crops can be obtained by planting locally grown seed selected to suit conditions and well preserved than by purchasing seed each year.</p> <p>The work with broom corn has so far proceeded on a rather small scale, but it is proposed to extend this work.</p>	<p>(6) Miscellaneous corn investigations. 878.00</p>	<p>(6) Miscellaneous corn investigations. 3,378.00</p> <p>The estimated increase of \$2,500 is desired to make possible the normal extension of the work, especially that with reference to the production of a saccharine broom corn, and to undertake investigations of the best varieties of corn for particular purposes, such as meal, breakfast foods, popcorn products, etc.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>PLANT NUTRITION AND TOBACCO INVESTIGATIONS.</b>		
(W. W. Garner, physiologist in charge.)		
Salaries, statutory.....	\$2,767.22	Salaries, statutory..... \$4,760.00
Salaries, lump-fund.....	24,052.09	Salaries, lump-fund..... 25,330.00
Miscellaneous expenses and supplies.....	2,544.47	Miscellaneous expenses and supplies..... 4,100.00
Traveling and field expenses.....	4,152.72	Traveling and field expenses..... 4,550.00
Total expenditures.....	33,516.50	Total..... 38,740.00
Outstanding liabilities.....	116.08	
Total expenditures and liabilities.....	33,632.58	
<b>PROJECTS.</b>		
(1) General supervisory and office work.....	15,334.32	(1) General supervisory and office work..... 6,620.00
This project includes the planning and direction of the field work, the conduct of correspondence, and other details in connection with the field investigations.		
<i>Results.</i> —The results under this project are reflected in the progress noted under all the other projects described in the following paragraphs:		
(2) Plant nutrition investigations.....	6,851.91	(2) Plant nutrition investigations..... 9,020.00
This work, formerly conducted under the heading of "Chemico-physiological tobacco investigations," has been modified and broadened and now covers problems in plant nutrition of a somewhat more general nature. The object of the work is to determine the most favorable ratios between the various elements of food of crop plants with reference to gross crop yields, and more particularly with respect to the production of the most valuable constituents of the plant. The studies include experiments for determining the functions of the different elements of plant food in their relation to the nutrition and composition of crop plants; field investigations with fertilizers of a general nature and methods for determining the plant-food requirements of crops.		
<i>Results.</i> —As a result of the studies on tobacco a process for the improvement of the burning quality of the cured leaf has been devised and a new method for the determination of nicotine has been developed. The important changes in composition effected in the curing and fermentation processes have been determined, and as a result a practical method for controlling diseases in the tobacco-curing barn by the use of artificial heat has been developed. Formulas for petunes to be used in the fermentation have been devised for the improvement of the flavor and aroma.		
Much important data has been secured regarding the use of high-grade and low-grade fertilizers and concerning the factors and conditions which control the amount of oil produced in such crops as cotton, soy beans, peanuts, and flax. Progress has also been made in developing better methods for determining the fertilizer requirements of crops.		
(3) Connecticut Valley tobacco investigations.....	2,163.90	(3) Connecticut Valley tobacco investigations..... 2,800.00
The work in Connecticut and Massachusetts consists of the improvement of the native tobaccos by hybridization and selection; the improvement of shade tobaccos by selection, breeding, and fertilization; and the improvements of methods of curing and packing the crop. Considerable attention is also being given to tobacco diseases, both in the seed bed and in the field. Especial attention is being devoted to the root rot, which has caused very great damage for the past few years. There is pressing need now to devise methods of restoring and maintaining former satisfactory yields in the broad-leaf district and of controlling the increasing prevalence of rust and calico.		
<i>Results.</i> —A new variety of cigar tobacco adapted to northern districts known as the Halladay Havana, has been developed and given a commercial test, with highly satisfactory results. This tobacco, resulting from a cross of Havanaseed with Sumatra, is attracting much interest among growers and will be of special value for wrapper and binder purposes because of the greatly increased number of leaves of large size and excellent shape, averaging in this respect fully one-third more productive than the present Havana seed leaf. A new variety is now being developed from a cross of broad-leaf and Sumatra, especially adapted to the broad-leaf section.		
The efficiency of steam sterilization of seed beds for the control of fungous diseases, especially root rot, has been fully demonstrated, and this process is now being generally adopted. A simple and comparatively inexpensive method has been devised and tested for the use of artificial heat in the curing barn in controlling pole sweat and in securing better colors in the curing process. Important experiments and practical demonstrations have been made regarding the value of the new process of harvesting by picking the leaves.		

<sup>1</sup> Includes statutory salaries amounting to \$2,767.22.<sup>2</sup> Includes statutory salaries amounting to \$4,760.<sup>3</sup> Includes statutory salaries amounting to \$4,760.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(4) New York tobacco investigations..... \$1,655.36 This work is conducted in the Onondaga district, which produces primarily a cigar-filler tobacco. This section formerly grew wrapper leaf, but trade requirements having changed, the product is classed as filler. This change of conditions has brought about confusion in types of leaf being grown and consequent deterioration in the product as a whole. Moreover, the growers have relied in the past entirely on commercial stable manure for growing the crops; but this supply having recently failed, it has become necessary to resort to commercial fertilizers. This has led to a marked demand for assistance in determining the proper usage of these fertilizers. <i>Results.</i> —Much has been accomplished in determining varieties best adapted to New York conditions. The Haynes type of filler, which has been much improved by seed selection, is now being generally grown by farmers. The greater uniformity of the product resulting from the weeding out of the less desirable types will materially enhance both yield and quality of the crop. A great deal of valuable data has been secured from cooperative work with growers as to the best use of commercial fertilizers as a partial substitute for barnyard manure. The bulk method of fermentation has been successfully demonstrated in New York. During the past year experiments and demonstrations in the best systems of crop rotation for the tobacco soils have been carried out.	(4) New York tobacco investigations..... \$2,050.00	(4) New York tobacco investigations..... \$2,050.00
(5) Ohio tobacco investigations..... 187.17 This work is conducted in cooperation with the Ohio Agricultural Experiment Station, and has for its object the improvement of the native tobaccos by breeding and selection and by improved methods of growing, curing, and fermenting the crop. The trade complains that the present types of Zimmer and Seedleaf are much inferior to the product formerly produced, and an effort is being made to restore these types by by breeding and selection to their former excellence. Information as to the best methods of fertilization, especially regarding the use of potash salts and concerning improved methods of curing and fermentation, is now very much needed. <i>Results.</i> —Good progress has been made in the breeding work, and a number of new types, hybrids, and improved strains of tobacco have been tested, some of which give promise of being of special value for filler purposes because of their increased productiveness and excellence in flavor and aroma. During the past season hybrids showing marked superiority in productiveness were grown on a commercial scale in cooperation with farmers for the purpose of introducing the tobaccos to the trade. The data from these demonstration areas is not yet available. The bulk method of fermentation has given good results when properly carried out, but packers need further instruction in the process. It is planned to bring the investigations in Ohio to a close as soon as the new varieties have been properly introduced.	(5) Ohio tobacco investigations.. 1,950.00	(5) Ohio tobacco investigations.. 1,650.00 (Decrease of \$300 by transfer to Pennsylvania work, described later.)
(6) Maryland tobacco investigations..... 1,762.93 This work is conducted in cooperation with the Maryland Agricultural Experiment Station. Work along the lines of improving the types of tobacco grown by breeding and selection has been continued, and experiments with fertilizers and the rotation of crops have been added with a view to improving farm practice as a whole, including the best use of fertilizers, the best strains of seed, the systematic use of soil-improving leguminous and forage crops, with such diversification as will make success less dependent upon the fortunes of tobacco as the sole money crop. <i>Results.</i> —Although this latter feature of the work has been included less than two years, it has already attracted wide attention throughout the tobacco producing sections of southern Maryland, indicating clearly that it is in the general style of farming in vogue rather than in the tobacco itself that the real weakness of the situation lies. In the fertilizer experiments information has been secured of a nature to show that when intelligently used and adequately supplemented by humus crops, fertilizers can be used to much greater advantage than at present, particularly in connection with the tobacco crop itself. Grass growing for hay has been much of a failure in the tobacco districts of Maryland, and there have been each year considerable quantities shipped in from outside. More than three tons of first class hay per acre were produced this year in connection with the rotation experiments, under circumstances that give every reason for believing that only the right adaptation of method is needed to produce as good hay crops in Maryland as anywhere else.	Maryland tobacco investigations. 2,000.00	(5) Maryland tobacco investigations..... 2,000.00

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>These experiments, as a whole, are influential demonstrations of the possibilities for improvement in returns from the use of the best all-round methods. The Maryland Experiment Station has recently added to its equipment for the work a fine new tobacco-curing barn, erected in accordance with plans submitted by this bureau. The crops included in the fertilizer and rotation work are tobacco, potatoes, wheat, grass for hay, corn, cowpeas, and crimson clover.</p>		
(7) Virginia tobacco investigations..... \$4,900.21	(7) Virginia tobacco investigations..... \$5,000.00	(7) Virginia tobacco investigations..... \$5,000.00
<p>This work is carried on in cooperation with the Virginia Agricultural Experiment Station, which has from the State legislature a special appropriation of \$5,000 per year for defraying its share of the expenses. The work is conducted on rather broad lines and is handled from the standpoint of improving farm practice as a whole, with tobacco as the leading but not the exclusive money crop. There are three main features of the work, viz: First, the plat test experiments with fertilizers; second, the crop rotation demonstration plats possessing some important experimental features; and, third, the tobacco breeding work, which has for its object the securing of the best strains of seed. The object-lesson phase of the work is emphasized. These investigations and experiments are being conducted in the bright or flue-cured tobacco sections of Virginia as well as in the dark-fired section and the sun-cured section, with sufficient modification to suit each locality.</p> <p><i>Results.</i>—This work has aroused unusual public interest and there is a marked demand for its extension into new localities. Although the work has not been under way long enough to carry any of the plats through a full rotation course, the results already obtained demonstrate most convincingly that the use of much more intensive methods is desirable. Crops of tobacco of from 1,400 to 1,600 pounds per acre instead of the general average of 800 pounds; wheat from 25 to 30 bushels per acre instead of from 10 to 15 bushels; and, most important of all, surprising grass crops yielding from 2 to 3 tons, and in one case 5 to 6 tons, per acre indicated some of the possibilities of crop yields in Virginia under proper methods. Cowpeas and Crimson clover especially are made full use of in these demonstrations. Field meetings have been held at several points where the work is conducted, which were unusually well attended by the farmers and aroused great interest. Many farmers all over the tobacco-growing sections of the State are putting into operation the methods demonstrated by the experiments to be the best.</p>		
(8) North Carolina tobacco investigations..... 1,439.59	(8) North Carolina tobacco investigations..... 1,800.00	(8) North Carolina tobacco investigations..... 2,500.00
<p>This work is conducted in cooperation with the North Carolina Department of Agriculture. A location has been selected for the work in Pitt County, near Greenville, in the "new belt" of the bright-tobacco section of the State, and it is intended to develop the work along the same lines as followed in Virginia, described in the preceding paragraph. A special problem of great importance to the new belt is the correction of the poor burning qualities of the tobacco, which is causing discrimination against the product of this section. The remedy is being sought in the use of correct formulas for fertilizers applied to the tobacco soils.</p> <p><i>Results.</i>—A preliminary set of fertilizer experiments and variety tests have been conducted and the results obtained indicate clearly that there is room for marked improvement in the present system of farming the tobacco lands of this section, just as has been so convincingly demonstrated in the case of the tobacco soils of Virginia.</p> <p>A series of institutes has been held in this section for the purpose of instructing farmers as to the need of using more potash in proper form in their fertilizers to improve the burning quality of their tobacco. Good progress is being made in the development of the work in North Carolina.</p>		<p>The estimated increase of \$750 is desired for the extension of the work begun in Pitt County into the middle and western tobacco-producing counties of the State, as there are important problems in those sections needing attention. The tobacco industry in Granville County is being destroyed by the Granville wilt and there are other questions of vital importance to the tobacco growers of the old belt which demand consideration.</p>
(9) Kentucky tobacco investigations..... 2,300.94	(9) Kentucky tobacco investigations..... 2,100.00	(9) Kentucky tobacco investigations..... 2,100.00
<p>The work is carried on in cooperation with the Kentucky Agricultural Experiment Station. The problems consist in the improvement of the tobacco itself in yield and quality by seed selection and breeding, together with the improvement of general farm methods by the more intelligent use of fertilizers and the fundamental building up of the soil by the systematic rotation of crops, including the grasses and legumes. Experiments are located in the Burley tobacco section at the experiment station in Lexington, in the "dark-fired" section in Christian County, in Breckenridge County in the Green River tobacco district, and in Warren County in the one-sucker district.</p>		

Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.</b>	<b>PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.</b>	<b>PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p><i>Results.</i>—A large number of selections and crosses of many of the types of tobacco grown in Kentucky have been made and tested out by the row-to-row method, and some excellent strains of seed secured. The fertilizer tests conducted in Christian County indicate in a most striking way the fundamental need of the soil of that locality for applications of phosphate fertilizers if the best crop results are to be obtained. The crop-rotation feature has been so recently introduced into the Kentucky work that no definite results can yet be reported.</p>		
(10) Texas tobacco investigations..... \$3,028.67	(10) Texas tobacco investigations. \$1,900.00	(10) Texas tobacco investigations \$1,900.00
<p>The work in Texas, inaugurated by the Bureau of Soils some years ago, has for its object the introduction of the growing of cigar-filler tobacco from Cuban seed. It has been shown that a filler of excellent general quality can be produced in several counties in east Texas, but further improvement in evenness of quality, and particularly in increase of yield, is required. This product must then be brought to the attention of the trade. An annual appropriation of \$1,000 from the State is now available for the support of this work, which will make it possible to carry out decisive experiments for determining and demonstrating the best use of fertilizers and methods of cultivating, curing, and handling cigar-filler tobacco as a money crop in connection with improved methods of farm practice.</p>		
<p><i>Results.</i>—During the past few years the work in Texas has been mainly of an advisory nature, and no attempt has been made to encourage the extension of the industry. Instruction has been given growers in the best available methods of growing, curing, and handling tobacco, and the improved methods of cultivation and fertilization recommended have served greatly to advance the general farm practice of this section. Growers have also been given advice in breeding and seed selection, and strains of tobacco of increased productiveness have been secured. Important experiments and demonstrations are being conducted on the test farm regarding the best systems of fertilizing and crop rotation for growing tobacco in this section.</p>		
(11) Alabama tobacco investigations..... 2,466.43	(11) Discontinued, see note in 1910 column.	(11) Discontinued, see note in 1910 column.
<p>The work in Alabama is also a continuation of the investigations inaugurated several years ago by the Bureau of Soils. It has been shown that a good grade of cigar filler tobacco can be grown from Cuban seed in the southern portion of the State, but as this is new tobacco territory, the growers require assistance and instruction in methods of growing and handling the crop, and the product must also be brought to the attention of the trade. A few farmers have undertaken the growing of wrapper tobacco under artificial shade, but this feature of the industry can not be recommended under present conditions. The situation as a whole is similar to that existing in Texas.</p>		
<p><i>Results.</i>—As in Texas, the work in Alabama has been mostly of an advisory nature, and has been conducted in cooperation with the State department of agriculture and industries. Limited quantities of selected seed for filler purposes have been furnished growers and they have been given instructions in the most approved methods of growing, curing, and handling this class of tobacco. Cooperative tests with growers for determining the best methods of fertilization have also been carried out.</p>		
<p><i>NOTE.</i>—The possibilities for growing successfully on suitable soil a high grade cigar filler tobacco from Cuban seed, having been fully demonstrated in Alabama, and interested farmers having been instructed in the methods of growing and handling the crop, the work in this State has been brought to a close in order that other sections requiring assistance might receive attention.</p>		
(12) Cooperative breeding demonstration in Georgia..... 1,541.15	(12) Cooperative breeding demonstrations in Georgia..... 1,640.00	(12) Discontinued; see note in 1911 column.
<p>The object of this work is to demonstrate the practical value of breeding and seed selection in the improvement of crops. The method is to encourage growers in making actual field tests in their own fields by giving them advice and assistance in the arrangement of breeding plats, in making intelligent selections and in the separation and sowing of seed. A distinctive feature of the work is its educational aspect, and breeding in itself is limited to the requirements for proper demonstration of the practical benefits to be derived from the application of its principles.</p>	<p><i>NOTE.</i>—The objects of this project having been practically accomplished, it is proposed to discontinue the work at the close of the present fiscal year in order that more attention can be given to the important work in plant nutrition now in progress, previously described.</p>	

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
PLANT NUTRITION AND TOBACCO INVESTIGATION—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.	PLANT NUTRITION AND TOBACCO INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p><i>Results.</i>—The work was begun with cotton, and all the standard varieties were tested in order to secure for further development those best adapted to northern Georgia. The superiority of the varieties selected over the ordinary unimproved cotton of the region has been demonstrated, and a number of the farmers are now growing these and carrying on the work of selection for their further improvement with the assistance of this bureau. The success of the work has led many of the best farmers to extend the practice of making careful field selections of seed to their crops of corn, cotton, oats, wheat, etc. One of the most intelligent farmers of northern Georgia has provided himself with equipment for ginning selections and for separating the seed for many of the growers of the region. As a result of the interest aroused in the work a number of county fairs are being held throughout the section, and these afford an invaluable means of acquainting the farmers generally with the results of the cooperative work of those who are improving their crops by intelligent breeding and seed selection, combined with good systems of soil management.</p>	<p>(13) Pennsylvania tobacco investigations..... \$1,200.00</p> <p>The objects of this work are to improve the yield and at least maintain the present quality of the filler tobacco crop by the development of more productive types, to introduce the steam sterilization of seed beds, and to develop improved methods of fertilizing, growing, and handling the tobacco crop of Pennsylvania.</p> <p><i>Results.</i>—The work in Pennsylvania, which is in cooperation with the State experiment station, was only begun last spring, so that decisive results have not yet been obtained. A farmers' bulletin has just been issued which treats in a practical way of the tobacco industry of the State.</p> <p>(14) South Carolina tobacco investigations..... 800.00</p> <p>The objects of this work are to determine the best rotation system for building up the tobacco soils of South Carolina and the best use of fertilizers for improving the yield and quality of the tobacco; to produce improved types by breeding and selection; to conduct experimental and demonstration plots illustrating the best methods of fertilizing and growing tobacco and crops grown in rotation therewith.</p> <p><i>Results.</i>—The work begun the past season has given preliminary results of importance regarding the fertilizer requirements of the tobacco soils; and the cause of the poor burning qualities of the tobacco, the same trouble that is met with in eastern North Carolina, has been investigated from the standpoint of the use of improper fertilizers.</p>	<p>(13) Pennsylvania tobacco investigations..... \$1,500.00</p> <p>Increase of \$300 by transfer from project numbered (5)—“Ohio tobacco investigations.”</p> <p>(14) South Carolina tobacco investigations..... 1,600.00</p> <p>The estimated increase of \$800 is desired for developing the work in South Carolina along the same general lines followed in North Carolina and Virginia.</p>
ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS.
(T. H. Kearney, physiologist in charge.)	(T. H. Kearney, physiologist in charge.)	(T. H. Kearney, physiologist in charge.)
Salaries, statutory..... \$1,200.00	Salaries, statutory..... \$1,380.00	Salaries, statutory..... \$1,380.00
Salaries, lump fund..... 10,529.92	Salaries, lump fund..... 8,490.00	Salaries, lump fund..... 9,000.00
Miscellaneous expenses and supplies..... 3,673.66	Miscellaneous expenses and supplies..... 6,110.00	Miscellaneous expenses and supplies..... 6,350.00
Traveling and field expenses..... 2,592.42	Traveling and field expenses..... 2,900.00	Traveling and field expenses..... 3,150.00
Total expenditures..... 17,996.00	Total..... 18,880.00	Total..... 19,880.00
Outstanding liabilities..... 419.11		
Total expenditures and liabilities..... 18,415.11		

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.
PROJECTS.	PROJECTS.	PROJECTS.
(1) Office and laboratory work..... <sup>1</sup> \$4,034.37 This project includes the maintenance of laboratory facilities for experimental work, the conducting of correspondence, and various other details connected with the field investigations. <i>Results.</i> —The results under this project are reflected in the progress noted under the various field projects, described in the following paragraphs:	(1) Office and laboratory work... <sup>2</sup> \$5,210.00	(1) Office and laboratory work... <sup>3</sup> \$5,210.00
(2) Breeding Egyptian cotton for the Southwest..... 5,721.74 The object of this work is to secure by acclimatization and breeding a strain of cotton of the Egyptian type adapted to growing under irrigation in the Colorado River Valley and adjacent territory, and to demonstrate the best cultural methods for producing the crop. The work is being carried on in cooperation with other offices of the Bureau of Plant Industry. <i>Results.</i> —Two new and distinct varieties of Egyptian cotton distinguished by their large bolls and lighter colored fiber from the Mit Afifi variety, with which the breeding work was begun, have been developed at Yuma, Ariz. One of these, the Yuma variety, yielded 475 pounds of lint per acre in a 4-acre field last year. The same variety was tested this year on a field scale at Sacaton, Ariz., and in smaller plantings at several localities in California. Wherever tested it maintained its superior qualities, being especially remarkable for the great strength of the fiber. In addition to these new varieties several improved strains of Mit Afifi adapted to conditions in the southwestern United States have been developed. These are in every way similar to the variety as grown in Egypt, exhibiting the characteristic brown-colored fiber, but are more productive and yield longer, stronger, and finer lint than can be obtained from imported seed. Next year these new types, which are described in Bulletin 200 of the Bureau of Plant Industry, will be tested on a field scale at a number of localities in Arizona and California. Plans are being considered for distributing a limited quantity of seed of the Yuma variety to farmers. Samples of lint from the 1909 crop of this variety were submitted last winter to a number of spinners and cotton experts, and were pronounced to be in every way equal to corresponding grades of imported Egyptian cotton. Sixteen bales of cotton grown from the acclimatized Egyptian seed at Sacaton under the supervision of the Office of Crop Physiology and Breeding Investigations of this bureau have been sold by the Office of Indian Affairs of the Department of the Interior at slightly more than double the price obtaining for Middling Upland cotton on the date of the sale.	(2) Breeding Egyptian cotton for the Southwest..... 4,105.00	(2) Breeding Egyptian cotton for the Southwest..... 4,105.00
(3) Breeding and physiological study of alkali-resistant and drought-resistant plants..... 8,659.00 The objects of this work are to produce alkali-resistant and drought-resistant crop plants, especially forage plants, adapted for growth in districts where dry farming is practiced or where the soil is too alkaline for ordinary varieties; also to study the physiology of alkali resistance and drought resistance, and to ascertain the indicator value of native vegetation in dry and alkaline regions. This work is conducted in cooperation with several of the State experiment stations and also with a number of offices of the Bureau of Plant Industry. <i>Results.</i> —The drought-resistant plant-breeding work has been continued with the result that during the past summer, which was unusually dry in many parts of the Great Plains area, it has been possible to secure more satisfactory tests of the comparative drought resistance of the different strains of forage plants developed in the course of this work than has been possible heretofore. As soon as it can be definitely determined which of the new strains of alfalfa, sorghum, millet, and smooth brome grass is the most drought resistant and otherwise adapted to conditions in the region, seed will be increased for distribution to farmers. The progress of the work up to the end of the year 1909 is described in detail in Bulletin 196 of the Bureau of Plant Industry. Much progress has been made in studying the physiology of drought resistance. The various factors which enable some species and varieties of crop plants to withstand drought more successfully than others have been analyzed. It is found that in some cases the superior drought resistance depends upon greater economy in the use of the water available, due to greater ability to reduce transpiration during hot weather or to a limited growth of stems and leaves, thus permitting a crop of grain to be made with a relatively small amount of water.	(3) Breeding and physiological study of alkali-resistant and drought-resistant plants.... 9,565.00	(3) Breeding and physiological study of alkali-resistant and drought-resistant plants... 10,565.00 The estimated increase of \$1,000 is desired for the purpose of increasing seed of the improved drought-resistant strains of forage plants, in extending the study of the indicator value of natural vegetation in the Great Basin region, and in meeting the cost of additional necessary experimental greenhouse work.

<sup>1</sup> Includes statutory salary, \$1,200.<sup>2</sup> Includes statutory salaries amounting to \$1,380.<sup>3</sup> Includes statutory salaries amounting to \$1,380.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.	ALKALI AND DROUGHT-RESISTANT PLANT-BREEDING INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>The results so far obtained in studying the indicator value of natural vegetation in the Great Plains area are described in Bulletin 201 of the Bureau of Plant Industry.</p> <p>Experiments have been continued at North Platte, Nebr., in cooperation with the State experiment station, to ascertain the effect upon plant growth of lime, gypsum, and stable manure added to soils containing alkali. The results so far obtained indicate that lime and gypsum have little effect in counteracting the action of this type of alkali, but that alkali soils of heavy texture which tend to become puddled when wet and to form a hard crust on the surface when dry, can be improved by heavy applications of stable manure.</p>		
SUGAR PLANT INVESTIGATIONS.	SUGAR PLANT INVESTIGATIONS.	SUGAR PLANT INVESTIGATIONS.
(C. O. Townsend and W. A. Orton, pathologists in charge.)	(W. A. Orton, pathologist in charge.)	(W. A. Orton, pathologist in charge.)
Salaries, statutory.....\$1,053.90	Salaries, statutory.....\$1,440.00	Salaries, statutory.....\$2,160.00
Salaries, lump fund.....14,174.62	Salaries, lump fund.....13,950.00	Salaries, lump fund.....19,150.00
Miscellaneous expenses and supplies.....1,965.67	Miscellaneous expenses and supplies.....3,625.00	Miscellaneous expenses and supplies.....5,665.00
Traveling and field expenses.....6,982.42	Traveling and field expenses.....5,500.00	Traveling and field expenses.....7,540.00
Total expenditures.....24,176.61	Total.....24,515.00	Total.....34,515.00
Outstanding liabilities.....675.66		
Total expenditures and liabilities.....24,852.27		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Office and laboratory work..... <sup>1</sup> \$3,786.40	(1) Office and laboratory work... <sup>2</sup> \$3,915.00	(1) Office and laboratory work.. <sup>3</sup> \$3,915.00
<p>This project includes the routine laboratory work in connection with the sugar-plant investigations, the general office details and correspondence, and other similar features connected with the work.</p> <p>Results.—The results under this project are reflected in the progress noted under all of the other projects, described in the following paragraphs.</p>		
(2) Improvement of yield and quality of sugar beets.....7,438.53	(2) Improvement of yield and quality of sugar beets.....8,310.00	(2) Improvement of yield and quality of sugar beets.....9,310.00
<p>The objects of this work are the production of American strains of sugar beets adapted to various conditions and of increased productivity. The production of single-germ seed and the extension of the sugar-beet industry are also objects of this work. The breeding of beets for resistance to drought, alkali, and for other desired improvements, is under way in a number of sections.</p> <p>Results.—A stock beet containing 14 per cent sugar has been produced as a result of this work. The stock beets averaged more than three times the weight of the sugar beets in the same field. Continued selection indicates that an increase in the size of the beet, accompanied by an increased sugar content, may be obtained.</p> <p>Strains of beets have been developed which produce from 50 to 60 per cent of single-germ seed, and the sugar content from these seeds has been increased. Each season's work shows an increased percentage of single-germ seeds.</p> <p>Beets that mature from one to two weeks earlier than the usual crop have been selected and siloed with a view to producing a strain of beets that will enable growers to begin the harvest at least two weeks earlier than at present. A large number of beets have been secured which show greater resistance to alkali and drought than the general crop, and it is believed that special strains will be secured suitable for semiarid and alkaline sections.</p>		<p>The estimated increase of \$1,000 is desired for the normal extension of the sugar-beet breeding experiments and for increasing the facilities for field tests.</p>
(3) Improvement of methods of growing sugar beets.....5,410.66	(3) Improvement of methods of growing sugar beets.....3,280.00	(3) Improvement of methods of growing sugar beets.....6,280.00
<p>This work includes a study of the proper cultural methods for sugar beets, such as the time and method of preparing the seed bed, width of rows, subsoiling, siloing, the use of fertilizers, etc. The objects are to find methods of lessening the cost of growing sugar beets, and at the same time to increase tonnage and improve the quality of the beets produced.</p> <p>Results.—Some interesting results have been obtained with reference to width of row, time and depth of cultivation, etc. It has been shown that best results are obtained when the seed bed is prepared in the fall. Continued cultivation beyond the usual time in mid-summer results in an increase of sugar per acre considerably in excess of the extra cost of cultivation. It has been found that green fertilizer and stable manure are indispensable to successful sugar-beet growing. Commercial fertilizers under some conditions give good results.</p>		<p>The estimated increase of \$3,000 is desired to carry on a comprehensive campaign for larger yields of sugar beets per acre at a less cost for hand labor; also to study the fundamental principles of beet culture and to devise improvements in cultural methods.</p>

<sup>1</sup> Includes statutory salaries amounting to \$1,053.90.

<sup>2</sup> Includes statutory salaries amounting to \$1,440.

<sup>3</sup> Includes statutory salaries amounting to \$2,160.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>SUGAR PLANT INVESTIGATIONS—Continued.</b>	<b>SUGAR PLANT INVESTIGATIONS—Continued.</b>	<b>SUGAR PLANT INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p>The most satisfactory method of siloing beets which has been found is the so-called sand method, in which the roots are entirely embedded in sand. This is an essential process in seed growing. Beets should be as nearly ripe as possible before siloing. By the use of the facts learned in these experiments the loss in silos has been reduced from about 25 to 5 per cent.</p> <p>(4) Study and control of diseases of sugar beets..... \$3,145.00</p> <p>This work includes the study in the field and in the laboratory of the most important diseases which attack sugar beets, chief among which are those known as curly-top and leaf-spot. The objects are to determine the causes of the diseases and to devise methods of controlling them successfully.</p> <p><i>Results.</i>—It has been definitely established that the so-called curly-top disease of the sugar beet is due to an insect, <i>Eutettix tenella</i>, commonly known as the white fly. Methods for the control and prevention of this trouble are now being worked out. Related forms of this disease have been found and are now under investigation. These are undoubtedly produced by insects related to the <i>Eutettix tenella</i>. It has been found that these insects can be destroyed by the use of certain sprays, but it has not yet been determined whether this is the most practicable method of controlling the disease.</p> <p>It has been shown that the leaf-spot disease can be controlled on a commercial scale by spraying with Bordeaux mixture. Root-rot of the beet may be controlled by the use of air-slaked lime.</p> <p>(5) Study and control of special plant diseases..... 1,350.00</p> <p>The object of these investigations has been mainly to study the diseases of plants grown in rotation with sugar plants, since it is possible for diseases to be transmitted through the soil or otherwise from one plant species to another.</p> <p><i>Results.</i>—It has been found that the fungus which produces the principal root-rot disease of the sugar beet will also attack alfalfa, one of the principal plants grown in rotation with sugar beets in the West. The same scab disease which attacks the sugar beet also attacks the white potato. Numerous other cases of this kind have been found, and undoubtedly others will be discovered as the work progresses.</p> <p>It should be mentioned in this connection that the crown gall, which has been so destructive on fruit trees, also attacks the sugar beet and a large number of plants that may be grown in connection with this crop, such as potatoes and alfalfa. Work upon the crown-gall disease in connection with the common daisy has led to the discovery of the cause of the crown gall of peaches and apples, one of the most destructive diseases known in plant industry.</p> <p><i>NOTE.</i>—This work has been transferred to other offices of the bureau—the crown-gall investigations and other bacteriological diseases to the Laboratory of Plant Pathology, and the remainder of the work to the project on forage-crop diseases of the Office of Cotton and Truck Diseases and Plant Disease Survey.</p> <p>(6) Investigations of the beet-sugar industry..... 3,721.68</p> <p>This work includes a study of the domestic production of sugar from beets and the securing of general information regarding the development and condition of the industry in the United States.</p> <p><i>Results.</i>—A report on the progress of the beet-sugar industry in the United States is issued annually from the office of the Secretary of Agriculture. This report is designed to give full information as to the development of the sugar-beet industry.</p>	<p>(4) Study and control of diseases of sugar beets..... \$3,120.00</p> <p>(5) Investigations of miscellaneous sugar-producing plants..... 1,690.00</p> <p>This project includes investigations of the culture, improvement, and diseases of the sugar cane; a study of sorghum as a source of sugar; and various other studies of sugar-producing plants, with a view to the development of the different sources of sugar production in the United States. The work is being conducted during the present year on a rather small scale, but its development is planned for the coming year. It is not yet possible to report results under this project.</p> <p>(6) Investigations of the beet-sugar industry..... 4,200.00</p>	<p>(4) Study and control of diseases of sugar beets..... \$5,120.00</p> <p>The estimated increase of \$2,000 is desired to continue the work on the leaf-spot disease of sugar beets, particularly in the Arkansas Valley, where it is most serious.</p> <p>(5) Investigations of miscellaneous sugar-producing plant. 5,690.00</p> <p>The estimated increase of \$4,000 is desired for the normal growth of this work, and especially to make a study of the diseases of sugar cane in Georgia, Louisiana, and Texas.</p> <p>(6) Investigations of the beet-sugar industry..... 4,200.00</p>
<b>TAXONOMIC AND RANGE INVESTIGATIONS.</b>	<b>TAXONOMIC AND RANGE INVESTIGATIONS.</b>	<b>TAXONOMIC AND RANGE INVESTIGATIONS.</b>
(Frederick V. Coville, botanist in charge.)	(Frederick V. Coville, botanist in charge.)	(Frederick V. Coville, botanist in charge.)
Salaries, statutory..... \$5,267.76	Salaries, statutory..... \$6,180.00	Salaries, statutory..... \$6,900.00
Salaries, lump-fund..... 13,381.49	Salaries, lump-fund..... 13,690.00	Salaries, lump-fund..... 15,500.00
Miscellaneous expenses and supplies..... 2,049.71	Miscellaneous expenses and supplies..... 1,730.00	Miscellaneous expenses and supplies..... 3,230.00
Traveling and field expenses..... 2,104.57	Traveling and field expenses..... 2,230.00	Traveling and field expenses..... 3,200.00
Total expenditures..... 22,803.53	Total..... 23,830.00	Total..... 28,830.00
Outstanding liabilities..... 338.05		
Total expenditures and liabilities..... 23,141.58		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<div>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....<sup>1</sup> \$4,532.23 This project includes the general planning and supervision of all taxonomic and related investigations, the conducting of correspondence, and other details connected with the field and laboratory work. <i>Results.</i>—The results under this project are reflected in the progress noted under all of the other projects, described in the following paragraphs.</div> <div>(2) Improvement of forest grazing areas..... 1,991.72 This work is conducted in cooperation with the Forest Service, and consists of (1) a study of the life history of the principal forage plants in the national forest ranges and experiments in grazing at different seasons to determine its effect on increase or decrease of forage; (2) an experiment in pasturing a band of sheep, without herding, in a coyote-proof inclosure, to ascertain to what extent the condition of the sheep and the pasturage will be improved under this system as contrasted with the ordinary herding system; and (3) experiments in the artificial reseeding of destructively overgrazed areas. The object is the development of some system of grazing whereby the forest grazing lands may be made to carry more stock. <i>Results.</i>—The coyote-proof pasture experiment has demonstrated that when a band of sheep is freed from the worry of a herder and his dogs and from the fear of wild animals it used 30 per cent less grass, the losses by death were reduced from 3 per cent to one-half of 1 per cent, the lambs were 8 pounds heavier, and four times as many sheep could be handled by one man. The natural reseeding experiment has demonstrated that by keeping stock off an overgrazed area during the early part of the season and pasturing it after the maturity of the seed crop a thorough reseeding of mountain bunch grass is secured, and that the stand of seedlings is better where the seed was tramped into the ground by the sheep than where it was left on the surface without treatment or was worked into the soil with a brush harrow. The artificial reseeding experiments have shown that for certain situations seeding with domestic grasses is successful, but that the soil of many of the mountain grazing areas is acid, and that on such areas only those domestic grasses succeed which are adapted to acid soils. This discovery explains many of the failures of earlier experimenters.</div> <div>(3) Study of the botany of the economic grasses.....<sup>2</sup> 4,728.78 This work consists of the collection, identification, and description of the various American grasses, with a view to the preparation of a manual containing authentic information regarding the habitat, manner of growth, and useful qualities of each species. The work is mainly performed in Washington, D. C., supplemented by field investigations in the Western States when necessary. <i>Results.</i>—Three papers have been prepared and published, entitled, respectively, "Type Specimens of American Grasses in European Herbaria," "A Catalogue of the Grasses of Cuba," and "North American Species of Panicum," a technical revision of that genus, one of the largest and most difficult groups of American grasses. The grasses received by the Office of Foreign Seed and Plant Introduction have been identified, and that office has been furnished with information to guide agricultural explorers in securing valuable grasses for trial. A digest of notes and observations as to the value of the different species of grasses for forage and for other economic purposes is being made.</div> <div>(4) Study of the economic botany of native plant races... 1,882.82 This work has for its object the embodiment in bulletin form of the store of valuable information regarding the identity, production, preparation, and uses of American plants contained in the notes made by Dr. Edward Palmer during the past 50 years in the western United States, Mexico, and South America. Full information as to the commercial importance of these plants at the present time will also form a part of the publication. A similar investigation of the plants used by the Indians of the United States is in progress, as well as a study of the flora of Alaska. <i>Results.</i>—Good progress is being made toward the completion of a work which covers the useful plants, trees, fruits, fibers, resins, balsams, oils, barks, medicinal products, dyes, tan stuffs, woods, etc., of the southwestern United States and Mexico. Much has been done in identifying the species to which they belong, fixing accurately the localities cited, and supplementing the information when necessary by obtaining additional material or notes, to establish the identity of a plant or tree, or to corroborate statements regarding the properties of vegetable products.</div>	<div>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....<sup>2</sup> \$4,606.67</div> <div>(2) Improvement of forest grazing areas..... 686.66</div> <div>(3) Study of the botany of the economic grasses.....<sup>4</sup> 5,535.00</div> <div>(4) Study of the economic botany of native plant races..... 2,350.00</div>	<div>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....<sup>2</sup> \$4,606.67</div> <div>(2) Improvement of forest grazing areas..... 3,186.66 The estimated increase of \$2,500 is desired for the normal extension of this work, in cooperation with the Forest Service.</div> <div>(3) Study of the botany of the economic grasses.....<sup>4</sup> 5,535.00</div> <div>(4) Study of the economic botany of native plant races..... 2,350.00</div>

<sup>1</sup> Includes statutory salaries amounting to \$2,575.  
<sup>2</sup> Includes statutory salaries amounting to \$3,075.  
<sup>3</sup> Includes statutory salaries amounting to \$620.

<sup>4</sup> Includes statutory salaries amounting to \$905.  
Includes statutory salaries amounting to \$1,625.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</b>	<b>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</b>	<b>TAXONOMIC AND RANGE INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—Continued.</b>	<b>PROJECTS—continued.</b>
(5) Investigations in botanical bibliography..... <sup>1</sup> \$2,129.39 This work consists of the preparation of lists of botanical works and periodicals, in order to make them available to the investigators in all lines, and with special reference to the preparation of a catalogue of the botanical works to be found in the various libraries in Washington, D. C. The object is to provide increased facilities for access to literature in botanical investigations. <i>Results.</i> —Before this work was undertaken there was much unnecessary duplication in the purchase of botanical books in the various Government libraries in Washington, and many rare and important works needed by botanical investigators and not supposed to be in the city were, in fact, here. The catalogue is an inestimable saving of time to men engaged in research and adds greatly to the efficiency of their work.	(5) Investigations in botanical bibliography..... <sup>2</sup> \$2,300.00	(5) Investigations in botanical bibliography..... <sup>2</sup> \$2,300.00
(6) Economic collections of cultivated plants..... 5,728.82 This work includes the collection and identification of specimens of cultivated or useful plants, especially such as are being introduced by the Department of Agriculture from foreign countries. The objects are to aid in the work of plant introduction and also to preserve for reference and study authentic and correctly named specimens of all cultivated plants. <i>Results.</i> —Of the plants offered for sale by nurserymen and seedsmen an unnecessarily large percentage are incorrectly named. Purchasers are misled and the progress of agriculture and horticulture suffers. The work of the economic collections, where critical botanical studies of such plants are made, has been of great assistance to both purchaser and dealer, often obviating serious losses. These collections also enable the identity of introduced plants to be established, and therefore insure the recording of information concerning the trial of a given introduction under the correct name of the species and variety. A large part of the work is conducted in cooperation with other offices of the Bureau of Plant Industry.	(6) Economic collections of cultivated plants..... 2,475.00	(6) Economic collections of cultivated plants..... 2,475.00
(7) Systematic work in economic botany..... 2,147.82 This project includes a botanical study of the fruits and nuts cultivated in America; a classification of the alfalfas, bur clovers, and related plants; a study of the heather and blueberry families of plants, with special reference to the domestication of the native blueberry; the classification of the forage plants cultivated in the United States; of ornamental trees and shrubs in the nursery trade; and a critical study of the currants and gooseberries. All of these studies are carried on with particular reference to the utilization of these various plants in the United States. <i>Results.</i> —The work on blueberries has resulted in the discovery of a beneficial fungus on the roots of these plants, through which the blueberry is enabled to flourish on acid soils. It is believed that the blueberry will now be cultivated commercially for its fruit, and that acid lands heretofore regarded as almost valueless will be utilized for the culture of this and other plants having similar beneficial fungi on their roots.	(7) Systematic work in economic botany..... 5,876.67	(7) Systematic work in economic botany..... 8,376.67 The estimated increase of \$2,500 is desired for the normal extension of the work of blueberry culture, which has been productive of excellent results, as referred to in the first column.
<b>FARM-MANAGEMENT INVESTIGATIONS.</b> (W. J. Spillman, agriculturist in charge.)	<b>FARM-MANAGEMENT INVESTIGATIONS.</b> (W. J. Spillman, agriculturist in charge.)	<b>FARM-MANAGEMENT INVESTIGATIONS.</b> (W. J. Spillman, agriculturist in charge.)
Salaries, statutory..... \$13,455.50 Salaries, lump fund..... 75,059.52 Miscellaneous expenses and supplies..... 8,802.67 Traveling and field expenses..... 32,604.05 Total expenditures..... 129,921.74 Outstanding liabilities..... 3,670.39 Total expenditures and liabilities..... 133,592.13	Salaries, statutory..... \$15,900.00 Salaries, lump fund..... 80,633.00 Miscellaneous expenses and supplies..... 7,556.00 Traveling and field expenses..... 47,245.00 Total..... 151,334.00	Salaries, statutory..... \$18,300.00 Salaries, lump fund..... 89,987.00 Miscellaneous expenses and supplies..... 6,630.00 Traveling and field expenses.... 46,417.00 Total..... 161,334.00
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) Administrative and supervisory work..... <sup>3</sup> 18,775.16 This project includes the planning and direction of the farm-management investigations, the conduct of correspondence, and other administrative details connected with the work.	(1) Administrative and supervisory work..... <sup>4</sup> 22,376.00	(1) Administrative and supervisory work..... <sup>5</sup> 22,376.00

<sup>1</sup> Includes statutory salaries amounting to \$2,072.76.<sup>2</sup> Includes statutory salaries amounting to \$2,200.<sup>3</sup> Includes statutory salaries amounting to \$5,638.<sup>4</sup> Includes statutory salaries amounting to \$6,640.<sup>5</sup> Includes statutory salaries amounting to \$9,040.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1232); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>FARM-MANAGEMENT INVESTIGATIONS—Continued.</p> <p>PROJECTS—continued.</p> <p>Results.—The results under this project are reflected in the progress and results noted under all of the other projects described in the following paragraphs:</p> <p>(2) Southern farm-management districts.....<sup>1</sup> \$28,272.03</p> <p>The work in the southern farm-management districts, of which there are six, covering the entire Southern States, consists of the study of the types of farming prevailing in each section, the types giving the best results, and the relation of the various types to local conditions of soil, climate, markets, labor, etc.; of the cropping systems in vogue on different types of farms; of the relation of individual crops to local conditions; of the methods used in the production and utilization of individual crops; of the dates when crops may be planted and when they are available for use for different purposes when planted at a particular time; and a detailed study of the systems of management on particular farms on which important problems have been solved. Working plans are made for selected farms with a view to rendering such farms objects of local interest and the means of teaching improved methods by example. In some of the older districts object-lesson farms have been established, which are visited occasionally in order to see that the plans are properly carried out. Farmers' meetings are held in cooperation with State organizations, and the results of the work are published as obtained. The work in the cotton-growing States is planned and carried out with the special object of assisting the farmers in meeting the ravages of the boll weevil. Demonstrations of crop diversification are being conducted, particularly in South Carolina and Alabama, in cooperation with the State experiment stations.</p> <p>Results.—Accurate knowledge has been obtained concerning the crops adapted to various sections of the South and of the types of farming which are to be recommended. Farmers in southeastern Virginia who have hitherto bought their hay have been induced to grow a considerable quantity for themselves. A good knowledge has also been obtained of the fertilizer requirements of various soils.</p> <p>A large number of farmers' meetings have been held throughout various parts of the South, and a great deal of interest has been aroused, especially in diversified farming, such as dairying, trucking, hay production, growing of beef cattle, hogs, and poultry, and the use of winter cover crops. The value of hay production has been demonstrated by the experience of a number of farmers in Georgia, who have grown wealthy from this type of farming.</p> <p>The operations of a very remarkable farm in South Carolina have been studied, and the results have been published as a farmers' bulletin. The owner of this farm has developed a worn-out, sandy farm that previously made only 8 bushels of corn and one-fifth of a bale of cotton per acre to a point where it now produces 2 bales of cotton, 85 bushels of corn, and 80 bushels of oats per acre.</p> <p>A large part of the work of the past year has been devoted to Florida, due to the great demand for information regarding farming possibilities in that State. This demand was created largely by the recent activity of certain land companies that have been advertising extensively, and the prospective settlers look to the department for reliable information before locating.</p> <p>Demonstration work in South Carolina has resulted in the awakening of general interest in improved methods of farming, and the farmers generally are beginning to make use of leguminous crops for the purpose of building up the soil. Improved methods adopted by the farmers have brought increased crop yields, and methods of tillage have improved very materially all over the State. Similar results have been obtained in Alabama.</p> <p>Results similar in a general way to those above described have been obtained in practically all of the Southern States, and the value of the work and the demand for its extension are constantly increasing.</p> <p>(3) Northern farm management districts.....<sup>4</sup> 30,792.08</p> <p>The work in the northern farm management districts, of which there are six, is essentially similar to that in the southern districts, previously described, with such modifications as the leading agricultural problems of the North demand. Special phases of farming, such as dairying, sheep and hog raising, the production of forage and pasture crops, potato growing, etc., are being studied, and demonstration work among farmers, particularly in the abandoned farming districts of New York and New England, is being conducted.</p>	<p>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</p> <p>PROJECTS—continued.</p> <p>(2) Southern farm-management districts.....<sup>2</sup> \$29,400.00</p> <p>(3) Northern farm management districts.....<sup>3</sup> 33,987.00</p>	<p>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</p> <p>PROJECTS—continued.</p> <p>(2) Southern farm-management districts.....<sup>5</sup> \$30,400.00</p> <p>The estimated increase of \$1,000 is desired to meet the normal growth of the demonstration work in the boll-weevil territory in improved methods of farm management and crop diversification.</p> <p>(3) Northern farm management districts.....<sup>5</sup> 34,987.00</p> <p>The estimated increase of \$1,000 is desired for carrying on demonstration work on the cut-over lands of the North.</p>

<sup>1</sup> Includes statutory salaries amounting to \$1,999.72.  
<sup>2</sup> Includes statutory salaries amounting to \$6,640.  
<sup>3</sup> Includes statutory salaries amounting to \$2,000.

<sup>4</sup> Includes statutory salaries amounting to \$994.45.  
<sup>5</sup> Includes statutory salary, \$900.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FARM-MANAGEMENT INVESTIGATIONS—Continued.	FARM-MANAGEMENT INVESTIGATIONS—Cont'd.	FARM-MANAGEMENT INVESTIGATIONS—Cont'd.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p><i>Results.</i>—It has been shown that the pressing farm problems in New York and the New England States are (1) lack of labor, (2) high price of bought feeds, (3) poor cropping systems and tillage; and (4) lack of knowledge of intensive types of farming. As a result of these studies we are now in position to recommend satisfactory cropping systems practically all over the district, and to advise farmers as to the crops adapted to their locality. A marked improvement in cropping systems is noticeable as a result of this work, and in some cases the value of agricultural lands has doubled as a direct result. Various publications of a popular nature have been issued and distributed.</p> <p>More than 2,000 farmers in Maine have been shown how to compound and mix commercial fertilizers. This has resulted in a saving in many instances of \$2 to \$10 per ton. In one locality two men report better crops than ever before and a total saving of \$800 in fertilizer bills.</p> <p>An agricultural survey of New Hampshire indicates that fruit and poultry are exceedingly valuable adjuncts to general farming and that in many instances the dairy farm needs radical remodeling if it is to continue a profitable industry in that State. The data showing distribution of investment on each farm, sources of income, expenses, etc., have been prepared for publication.</p> <p>Valuable facts concerning the farm practices in Pennsylvania, New Jersey, Ohio, Indiana, and Illinois have been learned, and the work in those States is making good progress.</p> <p>In Wisconsin, Michigan, Minnesota, and the eastern Dakotas the work of the past two seasons shows that hairy vetch grows well on the lighter, sandier soils of this district, and when grown with rye as a support gives profitable yields of seed. This is an important phase of the industry, as at present practically all of the thousands of bushels of this seed now used in this country is imported from Europe.</p> <p>An agricultural map of Iowa has been made, showing the agricultural sections of the entire State and the important problems of each section. The more pressing of these agricultural problems are now being studied in detail.</p> <p>In Missouri four demonstration farms have been established in typical sections of the State along model farm lines. A farm-management association of 200 members, with a junior organization for boys, has been organized, the members of which, coached by the department, act as centers of influence along better-farming lines in their respective communities.</p> <p>(4) Western farm-management districts..... \$10,089.09</p> <p>The work of the several western farm-management districts is essentially similar in plan of operation to that in the southern and northern districts previously described, with such modifications as western agricultural conditions require. Agricultural reconnoissances of various sections about which little is known are also features of this work.</p> <p><i>Results.</i>—The crops best suited to the various soils and rainfall zones of Kansas, Nebraska, and eastern Colorado have been determined, and a general idea of the types of farming prevailing has been obtained. The methods in vogue are those common to new, rich sections. The farming consists largely of grain and hay production, more especially grain. In the eastern part of the district, and in some localities elsewhere, a great deal of stock is raised. Little attention is paid by farmers to definite cropping systems or to methods of keeping up the soil fertility.</p> <p>Important discoveries have been made with relation to farm practice in sugar-beet culture and the adaptability of this industry to various sections. An agricultural survey of the State of Nebraska has been completed.</p> <p>A good knowledge has been obtained of ranch methods, and a careful agricultural survey has been made of two counties in Montana, as well as of western North Dakota and western South Dakota. The results of this investigation have been published.</p> <p>In Oregon, Washington, and Idaho very gratifying results have followed the publication of various bulletins relating to this district. Farmers' Bulletin 294, entitled "Farm Practice in the Columbia Basin Upland," has had a marked effect in improving the tillage in the drier sections of these States. The result has been a marked increase in the yield of crops, especially wheat. It has been found possible to grow wheat with less than</p>	<p>(4) Western farm-management districts..... \$12,176.00</p>	<p>(4) Western farm-management districts..... \$15,176.00</p> <p>The estimated increase of \$3,000 is desired for the normal growth of the western farm-management work, especially to make further studies of the agricultural possibilities of the newer sections, similar to those already conducted.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FARM-MANAGEMENT INVESTIGATIONS—Continued.	FARM-MANAGEMENT INVESTIGATIONS—Cont'd.	FARM-MANAGEMENT INVESTIGATIONS—Cont'd.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
12 inches of rainfall. A number of varieties of winter wheat have been found which seem to be adapted to local conditions and which make good flour. Various publications relating to this district have been issued during the past year.		
(5) Tillage investigations..... \$1,557.50	(5) Tillage investigations..... \$2,000.00	(5) Tillage investigations..... \$2,000.00
This project includes the collection of information with reference to tillage practices in vogue in the various sections of the country; a study of the relation of weeds to the tillage needs of the corn crop, and experiments with a view to learning the fundamental principles underlying tillage. The work is conducted in cooperation with farmers and several of the State experiment stations.		
<i>Results.</i> —A great quantity of information has been collected concerning implements and methods of tillage in all parts of the country. These studies have afforded a clearer knowledge of the reasons for the various tillage practices. It is planned to extend these investigations to other important agricultural sections as opportunity offers.		
(6) Study of methods of eradicating weeds..... 3,986.47	(6) Study of methods of eradicating weeds..... 6,350.00	(6) Study of methods of eradicating weeds..... 6,350.00
This work consists of a study of the persistent perennial weeds, such as Johnson grass, quack grass, Bermuda grass, wild morning-glory, Canada thistle, and others, as well as to ascertain the possibility of maintaining weed-free farms. The objects are the control or eradication of the most troublesome weeds of the farm.		
<i>Results.</i> —A practical and simple method of controlling Johnson grass has been discovered and is described in Farmers' Bulletin 279. Since the publication of this bulletin it has been found that the dreaded quack grass can be controlled in the same manner. The experiences of many farmers have confirmed the results set forth in this bulletin.		
A circular on the agronomic habits of the wild onion and suggesting means of control has been issued. A farmers' bulletin giving results of investigations on bindweed, or wild morning-glory, has been completed. Cooperation with about 150 farmers in the study of the relation of weeds is now under way, these studies including many important weeds.		
(7) Study of farm practice in hay production..... 5,096.39	(7) Study of farm practice in hay production..... 3,960.00	(7) Study of farm practice in hay production..... 3,960.00
This work consists of a study of farm practice in the production, utilization, and marketing of hay, with the object of improving its quality, cheapening its production, and studying the grades and standards of market hay and systems of curing in sections subject to unfavorable weather during hay harvest, in order to encourage the production of hay in regions where the supply is now purchased.		
<i>Results.</i> —The cause of the losses in hay, due to improper curing, baling, and marketing, has been ascertained and bulletins have been issued giving advice to farmers on this subject. The study of the artificial curing of hay has been continued and a drier for alfalfa and other coarse legumes was designed, built, and operated during the past season. The results so far show that green alfalfa can be cured into a superior hay in about 20 minutes in the drier at a cost which does not exceed the ordinary cost of curing in the field by the present methods. The use of the drier will enable the farmer to more than double his profits on hay, and can be used to advantage throughout the entire South.		
(8) Miscellaneous investigations of farm practice..... 9,444.27	(8) Miscellaneous investigations of farm practice..... 13,330.00	(8) Miscellaneous investigations of farm practice..... 13,330.00
This work includes a study of farm practice in the production and use of green manures and commercial fertilizers and of the relation of types of farming to soil fertility and fertilizers; investigations of methods of clearing logged-off land for cultivation; a study of the varieties of cassava, with special reference to the use of this plant as a farm crop; and various other investigations of farm practice. Cooperation with several of the State experiment stations is in effect in various phases of this work.		
<i>Results.</i> —As a result of this work it is now possible to advise farmers in the use of fertilizers, especially in the Middle Atlantic States. It has been found that the more soluble forms of phosphoric acid give best results for most cultivated crops, while the less soluble forms give best results when used on winter grains and grasses. Considerable knowledge has been gained concerning rotations for improving and maintaining soil fertility. Winter wheat and rye have been found to be good cover crops to grow for maintaining the humus in soils.		
Three strains of cassava which reproduce true to seed have been developed and are now being propagated on a considerable scale. About 75 varieties of cassava have been tested and about 25 have been selected for further testing. All of these produce seed and yield fully as heavily as plants produced from cuttings in the		

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FARM-MANAGEMENT INVESTIGATIONS—Continued.</b>	<b>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</b>	<b>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p>usual way, and yield 15 to 20 tons per acre. By the development of varieties that can be grown from seed the area of profitable cassava culture will be extended much farther north. Definite results have been delayed in this work owing to the destructive effects of hurricanes, yet we have saved seed enough of three varieties for a small distribution next spring.</p> <p>A circular has been issued giving a summary of information gathered from those who have had experience in clearing logged-off land. Definite data have been secured from a large number of crews engaged in clearing land. The legislature of the State of Washington at its last session appropriated \$5,000 to be used in these investigations in that State in cooperation with the bureau. A bulletin entitled, "Methods of Clearing Logged-off Land for Farming in the Pacific Northwest," has been issued. Further results are now on record in the office.</p>		
(9) Study of farm economics..... \$15,060.62	(9) Study of farm economics..... \$15,400.00	(9) Study of farm economics.... \$20,400.00
<p>The objects of this work are to secure a knowledge of the cost of all kinds of farming operations, and of the profits from different crops, classes of live stock, and types of farming; to work out systems of records for farmers and of financial accounting on the farm; the study of feeding systems; and also to ascertain the equipment required for farms of different sizes and types. Cooperation with the State experiment stations and with farmers is practiced in this work.</p>		<p>The estimated increase of \$5,000 is desired for extending the study of farm equipment in Minnesota and Nebraska in order to meet the special request of the experiment stations of these States for assistance in directing such work; also for extending the study of farm book-keeping, which will be done in cooperation with the Cornell Experiment Station.</p>
<p><i>Results.</i>—Suitable methods of conducting investigations of this kind have been worked out. Much information concerning equipment, the planning of cropping systems, and the cost of agricultural operations has been accumulated, which will be of great aid in advising farmers as to profitable systems of farming. Cooperation with selected farmers is being rapidly extended. Complete farm inventories have been made and farms surveyed to determine crop acreages and field arrangement. Summaries of statistical data collected are now being made and two bulletins are nearing completion. One deals with the subject of book-keeping for farmers' use. The other treats of the methods used in collecting data on the labor cost of farm operations. A bulletin on traction plowing has been prepared and published, also a circular on small-tool equipment. Inventories and systematic study of the equipment of representative farms made in the Central States have been tabulated and the data arranged in usable form.</p>		
(10) Preparation of farm plans..... 578.90	(10) Preparation of farm plans.... 3,300.00	(10) Preparation of farm plans... 3,300.00
<p>This project includes the necessary work connected with the drawing of plans for object-lesson farms and the figuring out of the proper cropping systems to be used thereon.</p> <p><i>Results.</i>—A large number of farm plans have been made. This work is incidental to the other projects and its value is therefore shown in the progress and results noted under the work in the farm management districts, etc., previously described.</p>		
(11) Cactus investigations..... 6,449.26	(11) Cactus investigations..... 7,025.00	(11) Cactus investigations..... 7,025.00
<p>This project includes experiments in the planting and cultivation of edible species of cacti, careful observations of their growth, and the determination of their feeding value. The value of the prickly pear and other species as food for stock is being studied, and experiments in the improvement of species by selection are also being conducted.</p> <p><i>Results.</i>—In southern Texas it has been shown that the prickly pear is the best insurance against famine that the farmer who raises cattle can have. It makes good roughage for cattle, sheep, and swine, as well as excellent succulent feed for the dairy at all seasons. Evidence secured during the past year demonstrates that prickly pear well cultivated will seldom, if ever, suffer from drought in southern Texas. Uncultivated pear, on the contrary often does.</p> <p>Two spineless species have been secured which withstood the temperature at San Antonio during the past winter. One of these is a cultivated species and the other a selected native. Nearly 10 tons of cuttings of spineless varieties have been distributed to the less frosty sections of the country where there is a probability of their success. The demand for these cuttings has exceeded the supply. A bulletin on Spineless Prickly Pears has been issued during the past year. Other publications on the value of various species of cacti, both as food for man and stock, have been issued and distributed. Many new hybrids have been produced with a view to combining the hardiness of cold-resistant forms with the vigorous</p>		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

<p>Detailed expenditures for the fiscal year ended June 30, 1910.</p>	<p>Appropriations for the current fiscal year ending June 30, 1911.</p>	<p>Estimated expenditures for the fiscal year ending June 30, 1912.</p>
<p>FARM-MANAGEMENT INVESTIGATIONS—Continued.</p> <p>PROJECTS—continued.</p> <p>growth of some of the southern forms. Large quantities of spineless cactus have been grown for distribution and these are now in the hands of practical growers in the regions to which they are adapted.</p> <p>(12) Range investigations..... \$3,460.40</p> <p>This project covers the study of the care and capacity of the stock ranges of the West and the practices of their management, with a view to ascertaining the best methods of securing the greatest profit from the ranges, particularly in Arizona, where the native pastures are badly devastated. The work is conducted in cooperation with the owners of the ranges.</p> <p>Results.—Publications have been prepared giving the results of these investigations. Methods for building up depleted range and native pastures have been worked out and put into operation on various ranges in the West. Much of this work has been conducted on the Santa Rita National Forest, in cooperation with the Arizona Agricultural Experiment Station. 2,000 head of sheep are being pastured on the Santa Rita inclosure and the effect on vegetation is being noted. Further observations have been made on the reservations in the State of Washington.</p> <p>FARMERS' COOPERATIVE DEMONSTRATION WORK.</p> <p>(Seaman A. Knapp, special agent in charge.)</p> <p>Salaries, statutory..... 4,449.17</p> <p>Salaries, lump fund..... 162,585.14</p> <p>Miscellaneous expenses and supplies..... 2,252.39</p> <p>Traveling and field expenses..... 32,533.47</p> <p>Total expenditures..... 201,820.17</p> <p>Outstanding liabilities..... 2,253.25</p> <p>Total expenditures and liabilities..... 204,073.42</p> <p>PROJECTS.</p> <p>(1) General administrative and supervisory work..... <sup>1</sup> 39,198.27</p> <p>This project includes the general office expenses connected with the demonstration work, the general supervision of the work by the special agent in charge and a corps of general assistants, the getting out of all instructions for raising of demonstration crops, etc.</p> <p>Results.—The administrative phase of the work has increased as the work has enlarged, but the administrative expense has been kept down by business system and strict economy. There is a constant and insistent demand from States not having this work to have its benefits extended to them.</p> <p>(2) Demonstration work in east Texas..... 26,284.87</p> <p>This work, which was inaugurated in 1904 on a small scale, has for its objects the encouragement of the diversification of crops, the improvement of cultural methods, and the general amelioration of farm conditions in the sections invaded by the cotton boll weevil or those threatened with invasion by that pest. It has been found by experience in conducting the farmers' cooperative demonstration work that upon the invasion of the boll weevil three things will generally occur in the section of country invaded: (1) There will be a general belief that cotton can not be produced under boll-weevil conditions. Public opinion takes on extreme pessimism, with the effect of so discouraging the farmers and their tenants that a much smaller amount of work is accomplished and all the work is done in a half-hearted way. To this fact alone is due the loss of probably 25 or 30 per cent in value of the crop produced by any community or county. (2) As all the crops have formerly been made upon the system of securing advances from merchants or bankers, the moment that it is certain that the boll weevil is about to invade the county these advances are either wholly or largely withdrawn, rendering it impossible to continue the cultivation of the soil as formerly, because labor can not be paid.</p> <p>(3) As soon as the two conditions described prevail a large proportion of the tenants abandon their farms and a still larger percentage of the labor leaves the county. To counteract these influences it is necessary that some well-organized and forceful body, such as the Farmers' Cooperative Demonstration Work, should enter the county. In all of this work the people are reached largely through personal contact with the representatives of the department.</p>	<p>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</p> <p>PROJECTS—continued.</p> <p>(12) Range investigations..... \$2,000.00</p> <p>FARMERS' COOPERATIVE DEMONSTRATION WORK.</p> <p>(Seaman A. Knapp, special agent in charge.)</p> <p>Salaries, statutory..... 8,920.00</p> <p>Salaries, lump fund..... 214,611.23</p> <p>Miscellaneous expenses and supplies..... 7,185.00</p> <p>Traveling and field expenses..... 28,358.77</p> <p>Total..... 259,075.00</p> <p>PROJECTS.</p> <p>(1) General administrative and supervisory work..... <sup>2</sup> 46,975.00</p> <p>(2) Demonstration work in east Texas..... 26,000.00</p>	<p>FARM-MANAGEMENT INVESTIGATIONS—Cont'd.</p> <p>PROJECTS—continued</p> <p>(12) Range investigations..... \$2,000.00</p> <p>FARMERS' COOPERATIVE DEMONSTRATION WORK.</p> <p>(Seaman A. Knapp, special agent in charge.)</p> <p>Salaries, statutory..... 16,020.00</p> <p>Salaries, lump fund..... 233,200.00</p> <p>Miscellaneous expenses and supplies..... 10,000.00</p> <p>Traveling and field expenses.... 34,855.00</p> <p>Total..... 294,075.00</p> <p>PROJECTS.</p> <p>(1) General administrative and supervisory work..... <sup>3</sup> 51,075.00</p> <p>The estimated increase of \$4,100 is desired to meet the increased administrative and supervisory expenses made necessary by the normal development of the work.</p> <p>(2) Demonstration work in east Texas..... 24,000.00</p> <p>(Decrease of \$2,000 by transfer to project numbered (4), "Demonstration work in Oklahoma.")</p>

<sup>1</sup> Includes statutory salaries amounting to \$4,449.17.

<sup>2</sup> Includes statutory salaries amounting to \$8,920.

<sup>3</sup> Includes statutory salaries amounting to \$16,020.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>	<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>	<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p><i>Results.</i>—The work has met with continued and unbounded success. Not only has it been proven in innumerable instances that a good crop of cotton can be raised in spite of the boll weevil, but the business confidence has been rapidly restored and has brought about a greater prosperity for east Texas than ever before in its history. They are producing more cotton per acre and at the same time producing their own supplies and other cash crops. This section is fast reaching a point where the methods advocated by the department in the demonstration work are being adopted by farmers generally.</p>		
(3) Demonstration work in west Texas..... \$21,833.40	(3) Demonstration work in west Texas..... \$27,600.00	(3) Demonstration work in west Texas..... \$34,000.00
<p>This work is essentially similar to the work in east Texas previously described, with such modifications as the conditions demand. The territory covered by this project is exceedingly large, being greater than the combined size of several other States. A large part of it is subjected to protracted droughts, in a measure complicating the situation, as in such periods the drought prevents the making of a good crop, while in wet periods the farmers have the weevil to contend with.</p> <p><i>Results.</i>—The results of the work under this project have been similar to those in the eastern portion of the State. In addition the advice of our agents as regards better plowing, better preparation of soil and selection of seed has had a very marked effect upon crop raising under arid conditions, the demonstration farms in dry periods holding out far better than crops not so handled.</p>		<p>The estimated increase of \$6,400 is desired to meet the great demand for assistance by the farmers of this region. Wherever the work has been inaugurated the results have been a marked success, but the funds have not been sufficient to permit the desired extension of the work in this western territory.</p>
(4) Demonstration work in Oklahoma..... 20,231.41	(4) Demonstration work in Oklahoma..... 25,000.00	(4) Demonstration work in Oklahoma..... 27,000.00
<p>This work is essentially similar to that in east Texas previously described but has special reference to the conditions existing in Oklahoma. In the eastern part of the State the lands are mainly owned by the Indians and the farms are nearly all leased to tenants at an annual rental. As a consequence, it is difficult to bring the best class of tenants into the region, and the conditions tend very slightly toward progress. The western portion of the State, on the other hand, is occupied by a very enterprising class of men, and they are very much interested in improving their conditions.</p> <p><i>Results.</i>—The results have been similar to those in east Texas. The use of better seed and better cultural methods has increased greatly. The weevil has advanced slowly into the State and everything possible has been done to prepare the farmers for its advent.</p>		<p>(Increase of \$2,000 by transfer from project numbered (2), "Demonstration work in east Texas.")</p>
(5) Demonstration work in Louisiana..... 29,380.15	(5) Demonstration work in Louisiana..... 30,500.00	(5) Demonstration work in Louisiana..... 28,000.00
<p>This work is essentially similar to that in east Texas, previously described, but has special reference to conditions existing in Louisiana, which are rather peculiar. This is a section where the main cotton lands, and especially the alluvial lands, are subject to much heavier rainfall than those of east Texas. Furthermore, the class of people is quite different. A large portion of the territory is farmed by the Acadian population, and it has been necessary to secure agents who understand the French language, and to organize with great care in order to reach every community. We have also found it necessary to insist upon a greater diversification of crops, since cotton has always been a rather uncertain plant under such humid conditions. There have been years of partial failure in the history of cotton production in Louisiana.</p> <p><i>Results.</i>—The results in Louisiana continue to be very successful. We have had the cooperation of the State authorities and local business organizations throughout the State. A very large number of demonstrators have shown possibility of raising cotton under boll-weevil conditions and these demonstrations have not been confined to small fields. We have instances of demonstrations as large as 1,000 acres where a yield of three-fourths of a bale were secured under boll-weevil conditions. Literally thousands of farmers have been able to raise cotton successfully under boll-weevil conditions through the efforts of this work.</p>		<p>(Decrease of \$2,500 by transfer to project numbered (8), "Demonstration work in Alabama.")</p>
(6) Demonstration work in Arkansas..... 21,873.06	(6) Demonstration work in Arkansas..... 26,500.00	(6) Demonstration work in Arkansas..... 28,000.00
<p>This work is essentially similar to that in east Texas, previously described, but has special reference to the peculiar conditions that prevail in Arkansas. In this State it has been necessary to place special emphasis on better preparation of the soil, better seed selection, and better cultivation of the crop, and to encourage the farmer toward improved cultural methods. There seems to be throughout the State a great laxity of public opinion with reference to these important items.</p> <p><i>Results.</i>—The weevil has advanced to the Arkansas River, near Little Rock, and covers a large part of the southern half of the State. The demonstrations have</p>		<p>The estimated increase of \$1,500 is desired to meet the slightly increased expenses due to the normal growth of the demonstration work in Arkansas.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>	<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>	<b>FARMERS' COOPERATIVE DEMONSTRATION WORK—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p>been universally successful. Confidence has been restored. The demonstration methods of raising cotton under boll-weevil conditions have been adopted by a great many farmers, and the public spirit of the people of the State has been so aroused that this work is receiving a large amount of local assistance, enabling us to extend the work more rapidly than we otherwise could.</p>		
(7) Demonstration work in Mississippi..... \$24,627.81	(7) Demonstration work in Mississippi..... \$31,500.00	(7) Demonstration work in Mississippi..... \$33,000.00
<p>This work is essentially similar to that in east Texas, previously described, but has special reference to the peculiar conditions prevailing in Mississippi. The nine delta counties of the Yazoo and Mississippi present a most unique condition, because they are mainly owned by large farmers and are almost solidly worked by negro labor. It required special organization to influence this condition, which threatened to have all the worst results of depression and loss of confidence described in the east Texas situation. Furthermore, owing to the fact that few of the large farmers reside upon their farms, it was more difficult to handle the situation. It has been necessary to employ men of large experience, and at great expense, in these counties, but this condition has been successfully met through the cooperation of the counties, which in many cases have furnished a large part of the funds necessary.</p> <p><i>Results.</i>—The results in Mississippi have been gratifying. In the fall of 1909 and the spring of 1910 there was a considerable panic over the weevil situation, but by the splendid cooperation of local business organizations with our work this was largely, if not entirely, allayed. The farmers have been taught to raise their own supplies in order to meet the boll-weevil situation, and an increasing number of demonstrations in raising cotton have been so successful that the confidence of the people in their ability to raise cotton has been largely restored. A small increase in the amount of the appropriation is necessary in order to cover counties where no work has yet been done.</p>		<p>The estimated increase of \$1,500 is desired to meet the slightly increased expenses due to the normal growth of the demonstration work in Mississippi</p>
(8) Demonstration work in Alabama..... 20,644.44	(8) Demonstration work in Alabama..... 30,500.00	(8) Demonstration work in Alabama..... 33,000.00
<p>This work is conducted along the same general lines as that in east Texas, previously described, but has special reference to the introduction of improved seed and the best methods of agriculture, in order to prepare the people in advance for the invasion of the boll weevil, which has already reached the southwestern border. Next season will witness the first year of the actual fight against the pest in Alabama. The active cooperation of the agricultural agencies of the State is helpful in Alabama, as it is elsewhere.</p> <p><i>Results.</i>—This work has been largely influential in teaching the farmers of Alabama to adopt better cultural methods and to raise their own home supplies. Unless local business panics should complicate the situation, it is believed that the farmers of Alabama are better prepared to combat the weevil than those of States farther west at a similar period. The problem from now on is to teach them to use these methods in making the direct fight against the weevil.</p>		<p>(Increase of \$2,500 by transfer from project No. 5, "Demonstration work in Louisiana.")</p>
	(9) Demonstration work in Tennessee..... 10,000.00	(9) Demonstration work in Tennessee..... 19,000.00
	<p>This work is conducted along the same general lines as as that in the other Southern States, with special reference to the conditions existing in western Tennessee, i. e., the portion of the State west of the Tennessee River, which is mainly a cotton-producing section. The object is to prepare the people for the invasion of the boll weevil by teaching them better cultural methods, the use of early maturing cotton varieties, and the diversification of crops.</p>	<p>The estimated increase of \$9,000 is desired to extend the work and cover a larger portion of the cotton counties.</p>
	(10) Demonstration work in Florida..... 4,500.00	(10) Demonstration work in Florida..... 17,000.00
	<p>This work, which was inaugurated during the present year, is conducted along the same general lines as that in other Southern States.</p>	<p>The estimated increase of \$12,500 is desired to increase the work sufficiently to cover a larger portion of the cotton-growing area of the State.</p>

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>DRY LAND AGRICULTURE INVESTIGATIONS.</b>	<b>DRY LAND AGRICULTURE INVESTIGATIONS.</b>	<b>DRY LAND AGRICULTURE INVESTIGATIONS.</b>
(E. C. Chilcott, agriculturist in charge.)	(E. C. Chilcott, agriculturist in charge.)	(E. C. Chilcott, agriculturist in charge.)
Salaries, statutory..... \$2,509.16	Salaries, statutory..... \$2,580.00	Salaries, statutory..... \$2,580.00
Salaries, lump fund..... 18,187.01	Salaries, lump fund..... 21,392.00	Salaries, lump fund..... 30,972.00
Miscellaneous expenses and supplies..... 5,849.97	Miscellaneous expenses and supplies..... 6,588.00	Miscellaneous expenses and supplies..... 10,000.00
Traveling and field expenses..... 4,937.00	Traveling and field expenses..... 3,750.00	Traveling and field expenses..... 5,758.00
Total expenditures..... 31,483.14	Total..... 34,310.00	Total..... 49,310.00
Outstanding liabilities..... 430.64		
Total expenditures and liabilities..... 31,913.78		
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) General supervisory and office work..... 10,570.14 This project includes the planning and direction of the field work, the conduct of correspondence, all necessary traveling expenses in supervising the work, and other details connected with the investigations. <i>Results.</i> —The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs:	(1) General supervisory and office work..... 10,630.00	(1) General supervisory and office work..... 13,110.00 The estimated increase of \$2,500 is desired for the purpose of employing an additional general field assistant made necessary by the natural development of the work and the constantly increasing demands of the farmers in the Great Plains area for assistance.
(2) Dickinson (N. Dak.) dry-land project..... 2,162.70 This project is located on the Dickinson substation of the North Dakota Agricultural Experiment Station. The work here, as well as that on all of the other projects which follow, consists of experiments in cultivation methods, crop rotations, and methods of conserving moisture in the soil. The object is to improve the agricultural practices in that portion of the semiarid West known as the Great Plains area, and to place dry farming in that region on a sound basis; in other words, to bring about the successful growing of crops under semiarid conditions without unnecessary depletion of the fertility of the soil. Close cooperation with nearly all of the State experiment stations in the Great Plains area has been effected in this work. <i>Results.</i> —Some of the most important general results obtained from the experiments carried on at this and at the other stations described in the following paragraphs, up to and including the season of 1909, are described in detail in Bulletin 187 of the Bureau of Plant Industry, entitled "A Study of Cultivation Methods and Crop Rotations for the Great Plains Area." The season of 1910 was not at all favorable at this station for the general production of crops on account of the severe drought, but was especially favorable for testing the various tillage methods and crop rotations.	(2) Dickinson (N. Dak.) dry-land project..... 1,160.00	(2) Dickinson (N. Dak.) dry-land project..... 1,800.00 The estimated increase of \$640 is desired to cover increases in operating expenses and assistance due to the natural development of the work the funds for which have been stationary for two years.
(3) Williston, N. Dak., dry-land project..... 255.75 The work on this project is essentially similar to that on the Dickinson project, previously described, with the added feature of cooperative demonstration work with the office of western agricultural extension of the Bureau of Plant Industry, which is fully outlined under that office. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. The drought was very severe at Williston the past season and some very valuable results were obtained.	(3) Williston, N. Dak., dry-land project..... 240.00	(3) Williston, N. Dak., dry-land project..... 1,850.00 The estimated increase of \$1,610 is desired to provide for the increased operating expenses and assistance which will be required at this station during the next fiscal year, under the cooperative plan now in effect.
(4) Edgeley, N. Dak., dry-land project..... 1,189.57 This project is located on the Edgeley substation of the North Dakota Agricultural Experiment Station, the work being essentially similar to that at Dickinson, previously described. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. The severe drought at Edgeley made the results of the past season especially valuable.	(4) Edgeley, N. Dak., dry-land project..... 1,160.00	(4) Edgeley, N. Dak., dry-land project..... 1,850.00 The estimated increase of \$690 is desired to cover the increased operating expenses and assistance due to the natural development of the work.
(5) Bellefourche, S. Dak., dry-land project..... 269.18 This is an independent station, maintained on a tract of the Bellefourche irrigation project placed at the disposal of this department by the Reclamation Service of the Department of the Interior, the necessary permanent improvements for the station having been furnished by that service. The work at this station is essentially similar to that on the Dickinson project, previously described, with the added feature of cooperative experimental work with the office of western agricultural extension of the bureau of plant industry, the general management and maintenance of the station being assumed by that office, whose work is described hereafter. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. A very severe drought at Bellefourche during the past season tested cultivation methods to an unusual degree.	(5) Bellefourche, S. Dak., dry-land project..... 260.00	(5) Bellefourche, S. Dak., dry-land project..... 1,850.00 The estimated increase of \$1,590 is desired to cover the increased operating expenses and assistance due to the natural development of the work.

Includes statutory salaries amounting to \$2,509.16.

<sup>2</sup> Includes statutory salaries amounting to \$2,580.<sup>3</sup> Includes statutory salaries amounting to \$2,580.

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
DRY LAND AGRICULTURE INVESTIGATIONS—Continued.	DRY LAND AGRICULTURE INVESTIGATIONS—Continued.	DRY LAND AGRICULTURE INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(6) North Platte, Nebr., dry-land project..... \$1,686.17 This project is located on the North Platte substation of the Nebraska Agricultural Experiment Station, the work being essentially similar to that on the Dickinson, N. Dak., project, previously described. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. As at the other stations, the severe drought of the past season afforded excellent opportunities for the testing of methods and the accumulation of valuable data.	(6) North Platte, Nebr., dry-land project..... \$1,860.00	(6) North Platte, Nebr., dry-land project..... \$2,300.00 The estimated increase of \$440 is desired to meet a slight increase in operating expenses and assistance which will be necessary at this station during the coming year.
(7) Hays, Kans., dry-land project..... 1,315.16 This project is located on the Hays substation of the Kansas Agricultural Experiment Station, the work being essentially similar to that on the other projects. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. The season of 1910 was fairly favorable for experimental work, although some of the plots suffered from high winds and attacks of chinch bugs. The results, however, were in general accord with those previously described.	(7) Hays, Kans., dry-land project. 1,440.00	(7) Hays, Kans., dry-land project. 1,850.00 The estimated increase of \$410 is desired to meet a slight increase in operating expenses and assistance due to the normal development of the work at this station.
(8) Garden City, Kans., dry-land project..... 1,057.35 This project is maintained in cooperation with the Kansas Agricultural Experiment Station, by which building, etc., for the work are furnished. The work at this station is essentially similar to that on the other projects previously described. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. The severe drought of the past season, while unfavorable for general crop production, was especially valuable in bringing out the advantages of proper methods of crop rotation and tillage.	(8) Garden City, Kans., dry-land project..... 1,320.00	(8) Garden City, Kans., dry-land project..... 1,850.00 The estimated increase of \$530 is desired to meet the slightly increased operating expenses and assistance due to the normal development of the work.
(9) Akron, Colo., dry-land project..... 4,706.36 This is an independent station of the Bureau of Plant Industry, though cooperation with the Colorado Agricultural Experiment Station is in effect, as well as cooperation with the Forest Service of the Department of Agriculture. Many offices of the Bureau of Plant Industry are conducting investigations at this point, the facilities for which are provided under this project. The general work is essentially similar to that on the other projects previously described. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. A number of changes have been made in the organization of the work at Akron; new buildings have been erected and the station is now well equipped for experimental work. The season of 1910 was one of deficient rainfall, but was especially favorable for testing the various crop rotations and tillage methods practiced at the station.	(9) Akron, Colo., dry-land project. 5,460.00	(9) Akron, Colo., dry-land project. 6,250.00 The estimated increase of \$790 is desired to cover a normal increase in the expenses of operating and maintaining this station and for the general development of the work thereon.
(10) Amarillo, Tex., dry-land project..... 1,682.20 The work at this point is conducted in cooperation with the Office of Grain Investigations of the Bureau of Plant Industry, by which the greater portion of the facilities and expenses of the work are furnished. The general supervision and management of the farm are in the hands of that office. The experiments in dry-land agriculture conducted at Amarillo are essentially similar to those at the other stations previously described. <i>Results.</i> —As the land on the new farm at Amarillo was only broken last year, the work during the present season, however, has been more of a preparatory nature, but this work has been well done and good results should be obtained next season.	(10) Amarillo, Tex., dry-land project..... 1,440.00	(10) Amarillo, Tex., dry-land project..... 1,950.00 The estimated increase of \$510 is desired to meet the normal increase in the operating expenses of this station.
(11) Dalhart, Tex., dry-land project..... 3,643.41 This is an independent station of the Bureau of Plant Industry, the work here being essentially similar to that on the other projects. Many offices of the bureau are conducting experiments at this station. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. On account of a heavy hail storm on May 21, 1910, however, all the crops at Dalhart were practically destroyed. This necessitated reseeding most of the farm, and while the work of this season has been somewhat retarded it has afforded valuable data concerning the possibility of utilizing land during the latter part of a season where crops have been destroyed earlier by the hail. Some of the results have been very valuable and instructive.	(11) Dalhart, Tex., dry-land project..... 4,500.00	(11) Dalhart, Tex., dry-land project..... 5,250.00 The estimated increase of \$750 is desired to cover the increased operating expenses due to the natural development of the work at this station.
(12) Judith Basin (Mont.) dry-land project..... 2,103.29 The work at this station is essentially similar to that of the other projects previously described, with the added feature of cooperation with the Montana Agricultural Experiment Station, which furnished teams and equipment. <i>Results.</i> —The general results described under the Dickinson project apply equally to this station. The season of 1910 here was rather unfavorable for the general production of crops, due to decreased rainfall. Some of the crops were an absolute failure, while others made very satisfactory yields, due to better methods of cultivation and crop rotation.	(12) Judith Basin (Mont.) dry-land project..... 2,040.00	(12) Judith Basin (Mont.) dry-land project..... 2,450.00 The estimated increase of \$410 is desired to cover increased operating expenses and equipment made necessary by the normal growth of the work at this station.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
DRY LAND AGRICULTURE INVESTIGATIONS—Continued.	DRY LAND AGRICULTURE INVESTIGATIONS—Continued.	DRY LAND AGRICULTURE INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(13) Scottsbluff (Nebr.) dry-land project..... \$1,272.50 This station is located on an irrigation project, and the work is carried on in cooperation with the Nebraska Agricultural Experiment Station and the Office of Western Agricultural Extension of the Bureau of Plant Industry. Various lines of cooperative work are being developed with other offices of the bureau. The experiment farm includes 160 acres, all of which might be irrigated, but about 35 acres of the farm is reserved for experiments in dry-land agriculture. Results.—About 100 acres of land have been broken and most of it was cropped in 1910. Necessary equipment has been installed on the farm, including buildings, machinery, fences, and live stock. The work is making good progress.	(13) Scottsbluff (Nebr.) dry-land project..... \$2,500.00  (14) Huntley (Mont.) dry-land project..... 300.00 The work at this point is to be conducted in cooperation with the Office of Western Agricultural Extension of the Bureau of Plant Industry, whose share in the work is described later. The dry-land work will be essentially similar to that on the other projects previously described. Results.—A tract of land was set aside for work at this station, but after it had been broken it proved to be so lacking in uniformity that it was considered inadvisable to conduct experiments upon it. It is believed, however, that a tract now under consideration will prove suitable for experiments next season, and steps are being taken for the inauguration of experimental work on the new tract.	(13) Scottsbluff (Nebr.) dry-land project..... \$3,250.00 The estimated increase of \$750 is desired to cover necessary additional expenses due to the natural development of the work at this station.  (14) Huntley (Mont.) dry-land project..... 1,850.00 The estimated increase of \$1,550 is desired to provide for necessary operating expenses and assistance in order to put the experimental work at this station on a firm basis.  (15) Hettinger (N. Dak.) dry-land project..... 1,850.00 This is a proposed new project, and the work will be carried on in cooperation with the North Dakota Agricultural Experiment Station, which maintains a substation at Hettinger. The proposed allotment of \$1,850 will cover operating expenses, equipment, and necessary assistance to inaugurate the work, which will be essentially similar to that at the other stations previously described.
WESTERN AGRICULTURAL EXTENSION. (Carl S. Scofield, agriculturist in charge.)	WESTERN AGRICULTURAL EXTENSION. (Carl S. Scofield, agriculturist in charge.)	WESTERN AGRICULTURAL EXTENSION. (Carl S. Scofield, agriculturist in charge.)
Salaries, statutory..... \$2,245.00 Salaries, lump fund..... 34,775.84 Miscellaneous expenses and supplies..... 30,581.94 Traveling and field expenses..... 8,416.17 Total expenditures..... 76,018.95 Outstanding liabilities..... 1,397.72 Total expenditures and liabilities..... 77,416.67	Salaries, statutory..... \$4,700.00 Salaries, lump fund..... 42,308.00 Miscellaneous expenses and supplies..... 7,597.00 Traveling and field expenses..... 24,475.00 Total..... 79,080.00	Salaries, statutory..... \$6,020.00 Salaries, lump fund..... 41,000.00 Miscellaneous expenses and supplies..... 7,500.00 Traveling and field expenses..... 24,560.00 Total..... 79,080.00
PROJECTS.	PROJECTS.	PROJECTS.
(1) General supervisory and office work..... <sup>1</sup> \$14,371.10 This project includes the planning and general direction of the field work, the summarizing of results, the carrying on of correspondence, and all necessary traveling expenses in supervising the field work. Results.—The results obtained under this project are shown in the progress noted under other projects described in the following paragraphs.	(1) General supervisory and office work..... <sup>2</sup> \$15,120.00	(1) General supervisory and office work..... <sup>3</sup> \$10,080.00

<sup>1</sup> Includes statutory salaries amounting to \$2,245.

<sup>2</sup> Includes statutory salaries amounting to \$4,700.

<sup>3</sup> Includes statutory salaries amounting to \$5,180.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
WESTERN AGRICULTURAL EXTENSION—Continued.	WESTERN AGRICULTURAL EXTENSION—Cont'd.	WESTERN AGRICULTURAL EXTENSION—Contd.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(2) Fallon, Nev., experiment farm..... \$15,346.48 This farm is located on the Truckee-Carson reclamation project, the work being conducted in cooperation with the United States Reclamation Service of the Department of the Interior. The work consists of trials of various field and forage crops to ascertain which crop plants are best adapted to conditions on this project. The objects are to find crops better adapted to this region than the very few now grown there and to work out rotations that will be profitable and that will improve the soil. In cooperation with other offices of the Bureau of Plant Industry, local problems of plant nutrition are being investigated in order to help new settlers in their task of subduing the raw desert soil. <i>Results.</i> —This farm includes 160 acres of land, of which about 50 acres have been leveled and put under irrigation. Two years' trials have shown that sugar beets of high quality can be produced, that Indian corn can be grown successfully, and that potatoes of excellent quality can be grown. Extensive trials of varieties of garden crops show which varieties are best suited to this region. The teams and general equipment of the farm have been augmented during the past year.	(2) Fallon, Nev., experiment farm. \$12,880.00	(2) Fallon, Nev., experiment farm. <sup>1</sup> \$13,000.00
(3) Yuma, Ariz., experiment farm..... 11,797.04 This work also is conducted on one of the irrigation projects of the Reclamation Service. The experiments have for their object a demonstration of how best to utilize the relatively high-priced land on this tract. The region is now producing almost nothing but alfalfa, but it is believed that cotton, corn, and heavy truck crops can be used in rotation with winter-growing legumes, thus keeping the land always occupied and producing high returns. Experiments with various high-priced crops, including orchard and timber crops, are being conducted in cooperation with other offices of this bureau and with the Forest Service. <i>Results.</i> —Highly successful yields of Egyptian cotton have been secured at this farm, and considerable emphasis has been placed on that portion of the work. In order to anticipate the problems that may arise in connection with the establishment of this new industry it has been necessary to take up the question of determining the best crops to be grown in rotation with cotton and also to investigate the marketing possibilities of the crop. These lines of work are both well underway, and there now seems to be good reasons for believing that Egyptian cotton may be profitably grown in the Southwest. Experiments with Eucalyptus have shown that these trees can be grown on the extensive overflowed lands of the valley, replacing cottonwood and willows. A new farm of 150 acres has been provided by the Reclamation Service, which is now being equipped with teams, tools, and general farm equipment.	(3) Yuma, Ariz., experiment farm. 11,500.00	(3) Yuma, Ariz., experiment farm. 10,000.00
(4) San Antonio, Tex., experiment farm..... 10,365.69 The work at this point consists of the testing of new varieties of crops for the region around San Antonio. The work also includes tests of standard crops; experiments with tillage and rotation methods to secure the best crop yields without irrigation; a study of the moisture requirements of the crops grown and the effect of different tillage methods on the absorption and retention of moisture in the soil; and trials of many varieties of orchard fruits, chiefly peaches, plums, apricots, figs, and olives, including introduced varieties and the use of various stocks in propagating these trees. The work of the San Antonio farm is conducted with special reference to the cotton-boll weevil problem. It has been found that injuries by the boll weevil are much less in a dry climate than in a humid one, and it is therefore important to press the culture of cotton as far west as possible. The region surrounding San Antonio is essentially arid, but good crops of cotton can be obtained by proper methods of tillage. <i>Results.</i> —Excellent crops of corn and cotton have been produced at San Antonio as a result of good tillage methods. The total eradication of Johnson grass has been accomplished in fields that were completely infested, and careful records of labor involved show that this eradication may be effected at a cost of less than \$1.25 per acre. A set of 30 varieties of peaches has been fruited for three years, and it is now possible to recommend to farmers the varieties that may be selected to succeed for special seasons or purposes. It has also been shown that fallowing land has other beneficial effects than conserving moisture.	(4) San Antonio, Tex., experiment farm..... 10,000.00	(4) San Antonio, Tex., experiment farm..... 11,000.00

<sup>1</sup> Includes statutory salaries amounting to \$840.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>WESTERN AGRICULTURAL EXTENSION—Continued.</b>	<b>WESTERN AGRICULTURAL EXTENSION—Cont'd.</b>	<b>WESTERN AGRICULTURAL EXTENSION—Cont'd.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
(5) Bellefourche (S. Dak.) experiment farm..... \$7,575.07 This farm consists of 200 acres, of which about one-half is irrigable. The farm lies within the Bellefourche reclamation project. Experimental work is being carried on in cooperation with four offices of the Bureau of Plant Industry. The work so far has been without irrigation, since no water is yet available. <i>Results.</i> —The cooperative work in breeding forage crops has yielded varieties of alfalfa, sorghum, and millet well suited to the region. Valuable varieties of cereals have been selected and propagated and experiments with tillage methods and crop rotation are showing the best methods of treating the land to secure crops of grain and forage.	(5) Bellefourche (S. Dak.) experiment farm..... \$10,000.00	(5) Bellefourche (S. Dak.) experiment farm..... \$9,000.00
(6) Huntley (Mont.) experiment farm..... 4,407.29 This work is conducted in cooperation with the Montana Agricultural Experiment Station, on three tracts of land on the Huntley irrigation project, aggregating over 200 acres. Experiments are planned to determine what crops, tillage methods, and rotations of crops are best suited to this region. Experiments and demonstrations will also be conducted in cooperation with other offices of this bureau. <i>Results.</i> —During the past season a series of rotation experiments was begun, with sugar beets as the main feature of the work. Large yields of beets were obtained and the beets were of excellent quality. A variety test of varieties of wheat, oats, and barley was conducted on the unirrigable portion of the experiment farm.	(6) Huntley (Mont.) experiment farm..... 6,000.00	(6) Huntley (Mont.) experiment farm..... 10,000.00
(7) Klamath (Oreg.) experiment farm..... 5,916.83 This work is conducted in cooperation with the Reclamation Service on a 40-acre tract of marsh land which has been leased for the purpose and which is typical of one-third of the Klamath reclamation project, of which it is a part. The experiments have been planned to show the best methods of subduing this marsh land, the crops that are best adapted to it, and how irrigation water may be applied to these crops. <i>Results.</i> —The experiments of the past season have shown that the reclamation of these marsh lands, if successful, must be very expensive, owing to the impervious nature of the soil. Until the problem of making this soil more pervious has been worked out it would seem advisable to suspend experiments with crop plants and consequently it is proposed to discontinue the work at Klamath after the current fiscal year.	(7) Klamath (Oreg.) experiment farm..... 6,000.00	(7) Pecos Valley (N. Mex.) experiment farm..... 9,000.00 Upon the discontinuance of the experimental work at Klamath, Oreg., it is proposed to start an experimental farm on one of the reclamation projects in the Pecos Valley. There are three small reclamation projects in this valley having somewhat similar conditions and on which farmers have experienced many difficulties with plant diseases and where the need for crops better suited to the conditions is acute. Through the establishment of an experiment farm it is proposed to bring to the aid of these farmers the expert experience of the investigators of the Bureau of Plant Industry.
(8) Umatilla (Oreg.) experiment farm..... 2,948.43 This work is conducted in cooperation with the Reclamation Service and the Oregon Agricultural Experiment Station on a tract of 40 acres of land on the Umatilla reclamation project. This farm is operated by the Oregon station under cooperative plans made with this bureau. The experiments and demonstrations deal with methods of subduing the land, the establishment of orchard crops to which the region appears to be well adapted, and the trial of varieties of these crops, together with small fruits and vegetable crops. <i>Results.</i> —During the past season the farm has been equipped with teams and farm implements, orchard trees and vines have been set, and experiments have been started with small fruits and truck crops. Careful clearing of the land has prevented serious injury to the crops from blowing sand, which has been a serious problem with local farmers.	(8) Umatilla (Oreg.) experiment farm..... 3,000.00	(8) Umatilla (Oreg.) experiment farm..... 3,000.00
(9) Williston (N. Dak.) demonstration work..... 2,877.52 This work is conducted on a farm owned and operated by the North Dakota Agricultural Experiment Station on the Williston reclamation project. One expert is employed by this department to conduct experiments and demonstrations on this experiment farm and to assist farmers on the project in using the best methods of irrigating their crops and in determining what crops can be most profitably grown in that region. <i>Results.</i> —The work of the expert during the past season has resulted in aiding many farms to produce highly satisfactory crops under irrigation, and on the experiment farm the irrigated crops have been much superior to those not irrigated.	(9) Williston (N. Dak.) demonstration work... 2,580.00	(9) Williston (N. Dak.) demonstration work..... 2,000.00

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>WESTERN AGRICULTURAL EXTENSION—Continued.</b>	<b>WESTERN AGRICULTURAL EXTENSION—Cont'd.</b>	<b>WESTERN AGRICULTURAL EXTENSION—Cont'd.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
10) Scottsbluff (Nebr.) experiment farm..... \$1,811.22	(10) Scottsbluff (Nebr.) experiment farm..... \$2,000.00	(10) Scottsbluff (Nebr.) experiment farm..... \$2,000.00
This farm is operated jointly with the Office of Dry Land Agriculture Investigations of this bureau and the Nebraska State Experiment Station. The farm is located on the North Platte reclamation project and the experiments are conducted with the object of demonstrating what crops are best suited to this region, to test varieties of these crops, and to determine the methods of tillage and rotation best suited to the conditions.		
<i>Results.</i> —During the past season the experiment farm has been partially equipped with teams and machinery and the land has been prepared for irrigation. A few preliminary crops have been produced and plans are now being made for the beginning of definite experimental work.		
<b>POMOLOGICAL COLLECTIONS.</b>	<b>POMOLOGICAL COLLECTIONS.</b>	<b>POMOLOGICAL COLLECTIONS.</b>
(G. B. Brackett, pomologist in charge.)	(G. B. Brackett, pomologist in charge.)	(G. B. Brackett, pomologist in charge.)
Salaries, statutory..... \$8,769.17	Salaries, statutory..... \$9,940.00	Salaries, statutory..... \$10,720.00
Salaries, lump fund..... 6,928.90	Salaries, lump fund..... 6,200.00	Salaries, lump fund..... 5,420.00
Miscellaneous expenses and supplies..... 715.08	Miscellaneous expenses and supplies..... 1,259.00	Miscellaneous expenses and supplies..... 1,259.00
Traveling and field expenses..... 138.98	Traveling and field expenses..... 100.00	Traveling and field expenses..... 100.00
Total expenditures..... 16,552.13	Total..... 17,499.00	Total..... 17,499.00
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) Office work and care of collections..... 1 6,829.81	(1) Office work and care of collections..... 2 4,226.00	(1) Office work and care of collections..... 3 4,226.00
This project includes the work connected with the maintenance of the pomological collections, the securing, by correspondence and otherwise, of data as to the culture and care of orchards and the selection of varieties for planting, and all other details necessary in carrying out the work. The object is the general dissemination of knowledge on the various subjects pertaining to fruit culture.		
<i>Results.</i> —Through this work it is possible to give advice to correspondents and others on the selection of orchard sites, the varieties most likely to succeed in their sections, and numerous other matters relating to the culture of orchard and other fruits. The collections serve as a basis for the fruit investigations of the bureau, and their value is therefore reflected in the progress noted under all of the other projects described in the following paragraphs. About 300 specimens have been added to the collection during the past year.		
(2) Identification and description of fruits..... 4 2,900.88	(2) Identification and description of fruits..... 4 2,936.00	(2) Identification and description of fruits..... 4 2,936.00
This work consists of the identification of samples of fruits submitted by correspondents, the State experiment stations, and others, and the furnishing of detailed descriptions of the different commercial varieties of fruits. The object is to aid fruit growers in establishing the identity of the varieties grown by them wherever there may be any doubt in that respect.		
<i>Results.</i> —A great number of samples of fruit varieties have been examined, identified, and described, and much valuable information has been collected and disseminated by means of this work. The number of fruits so received during the past fiscal year exceeded that for several previous years. A total of 3,224 packages of fruit were received, of which 1,322 varieties were for identification and 1,902 for comparison and examination. Many of these were found to be promising new fruits which may prove of considerable value. Descriptions of 601 varieties have been made during the year, and 507 pomological specimens were added to the collections as a result of this work.		
(3) Simplification of fruit nomenclature..... 1,306.44	(3) Simplification of fruit nomenclature..... 2,920.00	(3) Simplification of fruit nomenclature..... 2,920.00
The objects of this work are to bring about a revision and simplification in the nomenclature of our principal fruits in order to prevent the losses experienced by orchardists through the commercial use of different names for the same variety in various parts of the country, and to aid in the establishment of fruit culture and nursery work on a stable basis as to its terminology. This work is the necessary basis of systematic pomology.		
<i>Results.</i> —A great deal has been done toward the purification of the nomenclature of several classes of fruits, notably the apple, pear, and peach. An exhaustive bulletin on the nomenclature of the apple and a similar one on the pear are now widely used by pomological workers and have received high commendation. A bulletin on the nomenclature of the peach is well under way, being the third of this series.		

1 Includes statutory salaries amounting to \$2,454.17.

2 Includes statutory salaries amounting to \$3,580.

3 Includes statutory salaries amounting to \$3,820.

4 Includes statutory salaries amounting to \$1,840.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
POMOLOGICAL COLLECTIONS—Continued.	POMOLOGICAL COLLECTIONS—Continued.	POMOLOGICAL COLLECTIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
During the past year considerable attention has been paid to the correcting of erroneous names of fruits. A third revision has been made of the Catalogue of Fruits, originally published several years ago. This catalogue consists of a list of fruits recommended for planting in various sections, and is the result of about 2,000 inquiries sent out to practical fruit growers who have tested these fruits in the various fruit districts of the country.		
4) Modeling and painting of fruits..... <sup>1</sup> \$4,475.00 This work consists of the preparation of models and paintings of fruits both for the use of the Department and the State experiment stations cooperating with it in fruit work. The objects are to preserve an authentic collection of models and paintings of fruit varieties for use in illustrating publications and in carrying on the various fruit investigations of the bureau.	(4) Modeling and painting of fruits..... <sup>1</sup> \$4,520.00	(4) Modeling and painting of fruits..... <sup>1</sup> \$4,520.00
<i>Results.</i> —Many reproductions of fruits, especially of rare and little-known varieties, by means of wax and water colors, have been made, and duplicate models have been furnished to the State experiment stations and to others interested in orchard work. These reproductions have assisted in the correction of nomenclature, the illustrating of publications, and other phases of the work. During the past year 444 paintings and 106 models were made and placed on record.		
(5) Studies of various fruit problems..... 1,040.00 This project includes the cooperative testing of fruit varieties on the Arlington Experimental Farm, studies of varieties of plums, cherries, pears, peaches, and various nut crops, such as the hickory and the Persian walnut, and various other problems. The objects are to determine varietal adaptability, to extend the area of fruit culture, and to secure varieties which will resist cold and disease.	(5) Studies of various fruit problems..... 2,897.00	(5) Studies of various fruit problems..... <sup>2</sup> 2,897.00
<i>Results.</i> —More than 600 varieties of fruit are now on trial on the testing grounds, and it has been possible by means of this experimental orchard to clear up the identity of a number of sorts and to advise fruit growers as to the best varieties to plant. A number of promising varieties have been distributed for trial.		
FIELD INVESTIGATIONS IN POMOLOGY.	FIELD INVESTIGATIONS IN POMOLOGY.	FIELD INVESTIGATIONS IN POMOLOGY.
(William A. Taylor and G. Harold Powell, pomologists in charge.)	(William A. Taylor, pomologist in charge; A. V. Stubenrauch, expert, acting, in charge.)	(William A. Taylor, pomologist in charge; A. V. Stubenrauch, expert, acting, in charge.)
Salaries, statutory..... \$6,120.00	Salaries, statutory..... \$6,120.00	Salaries, statutory..... \$10,020.00
Salaries, lump fund..... 35,203.30	Salaries, lump fund..... 34,001.00	Salaries, lump fund..... 44,415.00
Miscellaneous expenses and supplies..... 11,279.54	Miscellaneous expenses and supplies..... 17,535.00	Miscellaneous expenses and supplies..... 15,249.00
Traveling and field expenses..... 15,199.21	Traveling and field expenses..... 17,600.00	Traveling and field expenses..... 21,292.00
Total expenditures..... 67,802.05	Total..... 75,256.00	Total..... 90,976.00
Outstanding liabilities..... 3,268.38		
71,070.43		
PROJECTS.	PROJECTS.	PROJECTS.
(1) Administrative and supervisory work..... <sup>3</sup> \$9,684.67 This project includes the general planning and supervision of the field investigations, the office work and correspondence, and all other necessary details connected with the various projects.	(1) Administrative and supervisory work..... <sup>1</sup> \$9,996.12	(1) Administrative and supervisory work..... <sup>4</sup> \$11,796.12 The increase of \$1,800 is desired in order to properly care for the increased office work caused by the extension of the field investigations.
<i>Results.</i> —The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs:		
(2) Fruit marketing, transportation, and storage..... 37,264.94 This general project includes experimental export shipments of fruits; apple-marketing investigations; improvement of methods of packing and shipping citrus fruits in California; improvement of methods of packing and shipping citrus fruits in Florida; improvement of methods of packing and shipping grapes in California; fruit-precooling investigations; and fruit-storage investigations.	(2) Fruit marketing, transportation, and storage..... 37,460.88	(2) Fruit marketing, transportation, and storage..... 46,460.88 The increase of \$9,000 is desired to provide for urgent demands for extensions and additions to the work. Most of the work in California has been carried on a sufficient length of time to yield conclusive data, and a transfer of the activities to other fruit-producing sections, notably those of the Northwest, is contemplated. The importance of the work is being more widely recognized and appreciated, and strong demands for the extension of these investigations are being
The experimental export shipments of fruits have for their objects the development of an export trade in peaches, summer and winter apples, pomelos, and pineapples, and the determination of the keeping qualities of these fruits in ocean transit, in order to insure their delivery to consumers in attractive, sound, and wholesome condition. An effort is being made to ascertain the relation of varieties, packages, methods of packing, etc., to the requirements of long-distance shipment.		

<sup>1</sup> Consists entirely of statutory salaries.<sup>2</sup> Includes statutory salaries amounting to \$540.

Includes statutory salaries amounting to \$4,080.

Includes statutory salaries amounting to \$7,980.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>FIELD INVESTIGATIONS IN POMOLOGY—Continued.</p> <p>PROJECTS—continued.</p> <p>In connection with the apple-marketing investigations an effort is being made to secure uniformity in packages and grade standards; to improve the carrying quality, durability, etc., of market fruits; and to bring about cooperative methods of marketing the fruit.</p> <p>In connection with the citrus work in California and Florida, studies are made of the causes of decay of oranges, lemons, etc., in the packing house and in transit; of the methods used in the groves in picking and handling the fruit; of the keeping quality in the market of fruit handled under different conditions. The objects are to prevent the losses resulting from improper handling and decay and therefore to increase the profit derived from the industry.</p> <p>The grape work in California which was begun two years ago has for its objects to improve the methods of handling the grape in California and to devise methods by which the rapidly increasing crop can be distributed over wider areas and over a longer period of time.</p> <p>In connection with the precooling investigations, a specially designed car in which is contained a refrigerating plant, designed by an expert of the bureau, has been secured. The car has been operated with oranges and table grapes in California and peaches in Georgia in order to obtain data on the effect of cooling at different temperatures and the rapidity with which these fruits may be cooled after loading in the cars.</p> <p>The fruit-storage work is chiefly concerned with the storage of citrus fruits, apples, and grapes, and is conducted both on the Pacific coast and in the East. The object is the determination of the principles which govern the successful cold storage of perishable fruits. Some attention is also being given to the farm storage-house problem, with a view to the development of practical methods of storing fruit in the farm. The work is conducted in cooperation with several of the State experiment stations.</p> <p>Results.—An excellent demand for American pears and other fruits has been created as a result of the experimental export work. Considerable shipments of oranges to British markets have been made, and a study of the best methods of packing and shipping these fruits has yielded a great quantity of valuable data.</p> <p>Apple-packing tests, under careful observation, have shown that with the methods generally practiced a considerable proportion of the losses of apples in transit are traceable to the orchard and packing operations. While the foreign demand for American apples continues strong, lack of uniformity in grade standards is operating against the market reputation of the apples of the United States in foreign markets, in contrast with the uniformly graded and branded fruit of Canada, which is subjected to Government inspection. An important movement toward the cooperative marketing of the crop in the principal eastern apple districts is taking place, and has already shown a distinctly beneficial effect upon prices and markets.</p> <p>When the citrus work was undertaken, the losses from decay of citrus fruits while in transit from California were estimated at more than a million dollars annually. The decays were found to result from improper methods of handling the fruit in the groves and packing houses, causing it to be bruised, and thereby made susceptible to rot. The decay was also due to lack of fumigation in the groves and to the slow cooling of the fruit in the cars. As a result of the work, the methods of labor and the packing-house equipment and methods have been modified and simplified; there has been greater fumigation in the groves, and the conditions of transcontinental shipment have been greatly improved; the losses have been reduced to a minimum, and it is estimated by the shippers of California that the work has saved a million dollars annually to the industry. Work on lemons has been carried on through three seasons and has yielded results of as much importance to the industry as the orange work. The general principles of the relation of decay to the type of handling given the fruit in preparing it for market was found to apply with equal force to the lemon. The demonstrations of these facts has led to a very great improvement in the methods of handling the lemon, with the result that the losses from decay in this fruit have been practically eliminated and a great saving to the industry has been accomplished.</p> <p>The citrus work in Florida has shown that the heavy losses in Florida oranges can be reduced by more careful methods of handling. A delegation of 40 Florida citrus growers and business men visited California in company with an expert of this department for the purpose of studying the influence of the bureau's</p>	<p>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</p> <p>PROJECTS—continued.</p>	<p>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</p> <p>PROJECTS—continued.</p> <p>received from many fruit-marketing districts. During the year 1911 many of the fruit-marketing projects have had to remain in a more or less quiescent condition owing to the heavy demands made upon the funds by the other problems under investigation.</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>FIELD INVESTIGATIONS IN POMOLOGY—Continued.</p> <p>PROJECTS—continued.</p> <p>work upon the industry in California. As a result of their observations and of the work of the bureau in Florida, a rapid remodeling of the Florida packing houses and equipment is taking place and better handling methods are being put into operation. A circular of information has been issued for the use of Florida orange growers, and a bulletin giving the results of the work as far as it has gone is ready for the press.</p> <p>The results of the California grape work have shown that mechanical injury is the cause of most of the decay; that sound grapes decay less, and that the use of a filler in the package, such as cork or redwood sawdust, improves the shipping and keeping quality. Redwood sawdust, now a waste product of the saw mills of California, has consistently proved superior to ground cork as a filler for grape packing. The experiments consisted of the shipments of carloads of grapes in which part of the fruit in each car was handled in different ways in California, packed different ways, and shipped at different periods after packing through to New York and the decay determined on arrival and at different periods thereafter. In addition to the shipping experiments, a number of local demonstrations were made in California in order to give the grape growers and packers an opportunity to see the results of the investigations. In this way many hundreds of growers were brought into actual contact with the work, with very great beneficial results to the industry.</p> <p>The precooling investigations are revolutionizing the methods of shipping fruits in some parts of the country. The transcontinental railroads running out of southern California have constructed precooling plants where trainloads of fruit can be quickly cooled after loading. The work has shown that the area of distribution can be widened by cooling fruits quickly after picking; that the ripening processes and decays can be checked; that the freight carrying capacity of a car can be increased by loading the packages more closely together; and that there may be a saving of ice in the precooled cars. These investigations have the hearty cooperation of the fruit-shipping interests and of the transportation companies.</p> <p>The fruit storage work has brought about a more careful handling of fruits, in the quicker storage after harvesting, in the lowering of storage temperatures, and also in a knowledge of the principles involved in the handling of fruits for storage.</p>	<p>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</p> <p>PROJECTS—continued.</p> <p>(3) Improvement of citrus fruits in California. \$5,080.00</p> <p>(4) Changed to "Nut culture".... 2,000.00</p>	<p>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</p> <p>PROJECTS—continued.</p> <p>(3) Improvement of citrus fruits in California. \$7,000.00 An increase of \$1,920 by transfer from another fund.</p> <p>(4) Nut culture..... 2,500.00 The increase of \$500 is desired for the purpose of broadening the scope of the work. So far, practically all effort has been devoted to the pecan. It is urgent that some special attention be given to the culture of nuts other than pecans in the United States. An increase of funds is desired to make a beginning on these other studies.</p>
<p>(3) Improvement of citrus fruits in California ..... \$3,587.29</p> <p>This project consists of a survey of the citrus-fruit districts of California for the purpose of locating exceptionally desirable trees for propagation with a view to developing improved strains and types of greater productiveness, better quality, and greater resistance to various adverse environmental conditions, such as low temperatures, diseases, and insects. The growers of citrus fruits are being interested in the work, and an effort is being made to increase the yield and improve the quality of the product through systematic bud selection and top working from the most desirable trees.</p> <p>Results.—Owing to the nature of the work and the objects to be accomplished, these investigations must be carried through a series of years before conclusive data can be obtained. During the past year, the first of these investigations, careful records were made of the yield of selected individual trees and also blocks of trees in the typical groves. Records of the crop of each tree and the number of each size of fruits were carefully made, together with observations on the habit, vigor, type of growth, and quality of the fruit. Records were taken in this way of 207 orange trees and 75 pomelo trees, all 12 years old. The results show marked differences in the yields of trees growing under the same conditions. The yields of oranges in the same grove ranged from 14 fruits weighing 7 pounds to 815 fruits weighing 432 pounds per tree. The yields of pomelos ranged from 5 to 520 pounds, with fruits ranging from perfectly seedless to an average of 50 seeds per fruit per tree.</p>		
<p>(4) Pecan investigations..... 2,040.33</p> <p>This project consists of a study of the relative merit and adaptability of pecan varieties, to ascertain the conditions under which pecan culture can successfully be carried on, especially in the South Atlantic States and Gulf States, and to determine the varietal adaptability of pecans to the soils and climatic conditions of those regions. A study of the effect of cross-pollination on quantity and quality of the crop is also being made.</p> <p>Results.—The more important seedling and grafted pecan orchards throughout the country have been located. Information on varietal adaptability is probably the greatest need of the pecan industry, and</p>		



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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>FIELD INVESTIGATIONS IN POMOLOGY—Continued.</b>	<b>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</b>	<b>FIELD INVESTIGATIONS IN POMOLOGY—Cont'd.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
(8) California grape investigations..... <sup>1</sup> \$5,356.70 This project includes the maintenance and operation of 10 experimental vineyards in California, where a study is being made of the congeniality of Vinifera varieties to various phylloxera-resistant stocks, and also of the adaptability of resistant stocks to soil types and conditions. Experiments in the grafting of Vinifera varieties on resistant stocks are being made, with a view to adapting them to regions infested with phylloxera. Trials of newly introduced varieties of grapes are also being made at the California vineyards. <i>Results.</i> —The results of the work have been published in Bulletin 172 of this bureau. The cooperative vineyards now contain a large number of varieties of Vinifera grapes as well as resistant stocks upon which these varieties have been grafted. Cooperators have been supplied with cuttings and rooted vines for trial.	(8) Vinifera grape investigations. <sup>1</sup> \$6,398.00	(8) Vinifera grape investigations. <sup>1</sup> \$7,398.00 The \$1,000 increase is desired to provide for the extension of the work of the viticultural group. The growth and development of the viticultural stations already established require more attention. Vintage studies are urgently needed, and a beginning of this work is contemplated.
(9) Rotundifolia grape investigations..... 1,495.86 This work has for its object the development of Rotundifolia grape culture in the South Atlantic and Gulf States. A study of the soils on which the different varieties thrive best and observations of the Rotundifolia in its native haunts are being made. Some attention is also being given to improvements in methods of culture and of training the vine, as well as in methods of marketing and handling the product. The chief experiments are located in North Carolina, in cooperation with the State Department of Agriculture. <i>Results.</i> —Pruning experiments have shown that the Rotundifolia varieties endure pruning well and are benefited thereby, both in size and quality of the fruit. The prospects for the development of the Rotundifolia grape industry in the South are very encouraging. The origin of the better and more promising varieties is being studied, and field observations on a large number of species are being made. Previous observations regarding the injury to the fruit of Rotundifolia by blackrot have been confirmed. The injury from this disease is becoming general, and experimental vineyard was sprayed with beneficial results.	(9) Rotundifolia grape investigations..... 2,396.00	(9) Rotundifolia grape investigations..... 2,396.00
(10) Miscellaneous grape investigations..... 5,526.69 Under this project is included the work for the reestablishment of the grape industry in the Middle Atlantic States and the development and improvement of the unfermented grape juice industry of the country. An experimental vineyard is maintained at Vineland, N. J., in cooperation with the New Jersey Experiment Station, where a collection of promising grape varieties is being assembled for experiments in cultural methods as well as in the control of diseases and insect pests. Under this project studies are made of the methods of pruning, trellising, training, and cultivating the grapevine, and the uses of the fruit for different purposes; the giving of information as to the preparation of grape products; and a study of the adaptability of grape varieties to culture in different vineyard sections. <i>Results.</i> —The Vineland experimental vineyard now consists of 9½ acres, planted to 50 American grape varieties, 17 of which were added during the past year. The vineyard is in an exceptionally flourishing condition. Experiments in fertilizing, pruning, training, and spraying have shown that some remarkable results are possible in the renovation of old run-down Concord vines through proper methods and care, the yield being increased and the quality of the fruit improved. As a result of these experiments a considerable acreage of new vineyards has been planted in the vicinity of Vineland. A great deal of information has been collected and disseminated regarding the culture of the grape and the preparation of various products therefrom.	(10) Miscellaneous grape investigations..... 5,216.00	(10) Miscellaneous grape investigations..... 5,216.00
<b>GREENHOUSES, GARDENS, AND GROUNDS.</b>	<b>GREENHOUSES, GARDENS, AND GROUNDS.</b>	<b>GREENHOUSES, GARDENS, AND GROUNDS.</b>
(E. M. Byrnes, superintendent.)	(E. M. Byrnes, superintendent.)	(E. M. Byrnes, superintendent.)
Salaries, statutory..... \$21,691.16	Salaries, statutory..... \$30,200.00	Salaries, statutory..... \$31,880.00
Salaries, lump fund..... 6,731.41	Salaries, lump fund..... 5,770.00	Salaries, lump fund..... 4,840.00
Miscellaneous expenses and supplies..... 13,971.48	Miscellaneous expenses and supplies..... 7,770.00	Miscellaneous expenses and supplies..... 9,020.00
Traveling expenses..... 97.20		
Total expenditures..... 42,491.25	Total..... 43,740.00	Total..... 45,740.00
Outstanding liabilities..... 198.38		
Total expenditures and liabilities..... 42,689.63		

<sup>1</sup> Includes statutory salaries amounting to \$1,200.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
GREENHOUSES, GARDENS, AND GROUNDS—Continued.	GREENHOUSES, GARDENS, AND GROUNDS—Continued.	GREENHOUSES, GARDENS, AND GROUNDS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(1) General supervisory and office work..... <sup>1</sup> \$2,964.63 This project includes the necessary office and supervisory work connected with the maintenance of the department greenhouses, the care and ornamentation of the grounds, the experimental work with greenhouse crops, and the other projects outlined in the following paragraphs.	(1) General supervisory and office work..... <sup>2</sup> \$3,540.00	(1) General supervisory and office work..... <sup>2</sup> \$3,540.00
(2) General care of department grounds..... <sup>3</sup> 11,556.82 This project includes the necessary details connected with the ornamentation, keeping in repair, and proper appearance of the grounds surrounding the department buildings.	(2) General care of department grounds..... <sup>4</sup> 10,940.00	(2) General care of department grounds..... <sup>5</sup> 10,940.00
(3) Repair and construction of greenhouses..... <sup>6</sup> 10,097.13 This project includes the making of necessary repairs to the greenhouses and other structures of the department, and the construction of additional houses needed in connection with the normal growth of the work and with the removal of the old range of greenhouses.	(3) Repair and construction of greenhouses..... <sup>7</sup> 4,560.00	(3) Repair and construction of greenhouses..... <sup>8</sup> 4,560.00
(4) Care of greenhouses and plants therein..... <sup>9</sup> 10,100.86 This project includes the maintenance of the department greenhouses and the proper care of the collection of tropical and miscellaneous plants contained therein.	(4) Care of greenhouses and plants therein..... <sup>10</sup> 12,040.00	(4) Care of greenhouses and plants therein..... <sup>10</sup> 14,040.00
(5) Experimental work with greenhouse crops..... <sup>11</sup> 2,836.15 This project includes experiments in growing of various florists' crops under glass, such as carnations, chrysanthemums, dahlias, and roses, and also in the forcing of vegetable crops, such as lettuce, celery, etc. This work has a great economic value, and is yielding excellent results.	(5) Experimental work with greenhouse crops..... <sup>12</sup> 5,120.00	(5) Experimental work with greenhouse crops..... <sup>12</sup> 5,120.00
(6) Greenhouse work in plant pathology and physiology.. <sup>13</sup> 2,660.64 This project includes the work of various offices of the bureau in the greenhouses, in the study of plant diseases; drug-plant and tea-culture experiments; seed testing; the study of tropical plants, etc. Greenhouse facilities are provided for this work, together with the necessary labor, etc.	(6) Greenhouse work in plant pathology and physiology..... <sup>14</sup> 4,000.00	(6) Greenhouse work in plant pathology and physiology.. <sup>14</sup> 4,000.00
(7) Propagation and distribution of plants..... <sup>15</sup> 2,423.40 This project includes the propagation of various flowering plants for ornamenting the department grounds, for exhibition purposes, and for special distribution.	(7) Propagation and distribution of plants..... <sup>16</sup> 3,540.00	(7) Propagation and distribution of plants..... <sup>16</sup> 3,540.00
ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS.	ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS.	ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS.
(L. C. Corbett, horticulturist in charge.)	(L. C. Corbett, horticulturist in charge.)	(L. C. Corbett, horticulturist in charge.)
Salaries, statutory..... <sup>17</sup> \$11,594.50	Salaries, statutory..... <sup>18</sup> \$13,480.00	Salaries, statutory..... <sup>19</sup> \$19,420.00
Salaries, lump fund..... <sup>18</sup> 29,706.91	Salaries, lump fund..... <sup>19</sup> 33,440.00	Salaries, lump fund..... <sup>20</sup> 33,530.00
Miscellaneous expenses and supplies..... <sup>19</sup> 8,908.34	Miscellaneous expenses and supplies..... <sup>20</sup> 5,688.60	Miscellaneous expenses and supplies..... <sup>21</sup> 6,000.00
Traveling and field expenses..... <sup>20</sup> 3,591.87	Traveling and field expenses..... <sup>21</sup> 2,341.40	Traveling and field expenses..... <sup>22</sup> 6,000.00
Total expenditures..... <sup>21</sup> 53,801.62	Total..... <sup>22</sup> 54,950.00	Total..... <sup>23</sup> 64,950.00
Outstanding liabilities..... <sup>22</sup> 1,547.79		
Total expenditures and liabilities..... <sup>23</sup> 55,349.41		
PROJECTS.		
(1) General supervisory and office work..... <sup>24</sup> 5,995.36 This project includes the planning and direction of the work in the laboratory at Washington and also in the field, the conduct of correspondence, and other details connected with the work. <i>Results.</i> —The results under this project are reflected in the progress noted under all the other projects described in the following paragraphs:	(1) General supervisory and office work..... <sup>25</sup> 6,328.60	(1) General supervisory and office work..... <sup>26</sup> 6,323.60
(2) Arlington (Va.) Experimental Farm..... <sup>25</sup> 25,128.46 This farm consists of 500 acres and is the field laboratory for the various bureaus and offices of the department. It is equipped with buildings, teams, tools, etc., for carrying on experiments. The object of the farm is to provide horticultural collections which will aid investigators in those lines, as well as afford opportunity for field experiments with a wide variety of plants adapted to this latitude. This project includes the fruit collections maintained on the farm in cooperation with the office of pomological collections and also cooperative work with the office of field investigations in pomology in securing varieties of fruit and ornamental trees for use at the ranger stations in the National Forests.	(2) Arlington (Va.) Experimental Farm..... <sup>26</sup> 25,261.40	(2) Arlington (Va.) Experimental Farm..... <sup>27</sup> 27,981.40 The increase of \$2,720 is desired to take care of the increasing cost of maintenance due to the increased amount of work which is being carried on at the farm and which can not be charged to the different projects.

<sup>1</sup> Includes statutory salaries amounting to \$900.<sup>2</sup> Includes statutory salaries amounting to \$1,000.<sup>3</sup> Includes statutory salaries amounting to \$4,045.<sup>4</sup> Includes statutory salaries amounting to \$6,940.<sup>5</sup> Includes statutory salaries amounting to \$7,780.<sup>6</sup> Includes statutory salaries amounting to \$2,580.<sup>7</sup> Includes statutory salaries amounting to \$2,360.<sup>8</sup> Includes statutory salaries amounting to \$3,400.<sup>9</sup> Includes statutory salaries amounting to \$6,597.83.<sup>10</sup> Includes statutory salaries amounting to \$9,040.<sup>11</sup> Includes statutory salaries amounting to \$2,506.11.<sup>12</sup> Includes statutory salaries amounting to \$4,100.<sup>13</sup> Includes statutory salaries amounting to \$2,455.<sup>14</sup> Includes statutory salaries amounting to \$3,120.<sup>15</sup> Includes statutory salaries amounting to \$2,207.22.<sup>16</sup> Includes statutory salaries amounting to \$3,440.<sup>17</sup> Includes statutory salaries amounting to \$4,660.<sup>18</sup> Includes statutory salaries amounting to \$4,360.<sup>19</sup> Includes statutory salaries amounting to \$6,934.50.<sup>20</sup> Includes statutory salaries amounting to \$9,120.<sup>21</sup> Includes statutory salaries amounting to \$15,060.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>  <b>PROJECTS—continued.</b>  <i>Results.</i> —The usefulness of the Arlington Experimental Farm to the bureau and to the department as a whole increases each year. The productiveness of the soil on the farm has been greatly improved as a result of tile-draining and the plowing under of leguminous and other crops for green manure. Not only has crop production been increased thereby, but the physical condition of the soil has been modified so that it is less affected by excessive rains or by drought than formerly. It is now possible to cultivate during seasons which prior to the establishment of these improved practices precluded all crop production. The development of the farm has demonstrated the improvement possible in the lands of the coastal plain of the United States and has provided a place within easy reach of Washington, D. C., where the department investigators can carry on field research. A wide variety of cultural tests, as well as breeding and selection work, is now being carried on at Arlington by many officers of this and other bureaus. The work on fruit varieties has afforded opportunities for comparing the habits of growth of the different varieties under orchard conditions and also a source from which to secure for propagation wood true to name. Fruit for systematic study, comparison, and descriptions has also been made available through these collections. (3) Truck-crop investigations..... \$7,501.23 This project includes potato, sweet potato, onion, and nutrition investigations with truck crops, and also investigations with tomatoes, beans, peas, cabbage, cucumbers, celery, horseradish, muskmelons, watermelons, and asparagus. <i>Results.</i> —Recent cultural studies of potatoes have disclosed the fact that certain varieties possess greater drought-resisting powers than others. Several of the high yielding European varieties are now being increased and distributed throughout the important potato-growing sections. Several sorts with decided disease resistance have been found as a result of investigation, and the best of these are now being tested in the various commercial potato districts. The hill-selection work which is now under way indicates that the yield of potatoes can be quite as materially increased as that of other crops. The average yield of potatoes in this country is far below what it is in European countries and also far below what our best growers believe is possible. It is believed that the income from the potato crop can be materially augmented by the selection and adaptation of varieties. Very material progress has been made in the work with varieties of sweet potatoes, especially in the matter of introducing standard sorts in localities where they have not been previously grown. Observations as to the comparative yield of varieties and the various problems connected with the storage of sweet potatoes for winter marketing have been made. An investigation of the commercial production of sweet potatoes has been completed and the results published in a farmers' bulletin. The Denia onion seed which has been imported by this bureau for the past three years has proven well adapted to the southwestern portions of the United States, and a very remunerative industry is being built on this variety. Special investigations are now under way to determine whether or not seed of this variety can be successfully produced in America. Investigations to determine the best varieties adapted to canning and catchup making have been in progress for several years, and as this is a very important commercial factor, it is gratifying to note that varieties of certain colors produce a high-grade product for canning and catchup making without the use of coloring matter. As a result of the nutrition investigations already made in the Norfolk (Va.) area, a number of the most progressive truck growers are using cowpeas extensively following early truck crops, to be turned under as a means of increasing the humus content of the soil. This practice is rapidly correcting many of the evils of a system of farming long conducted on the basis of commercial fertilizers minus humus—a ruinous system. A rotation which combines commercial fertilizers with humus either in the form of manure or a green crop turned under is bound to improve crop yields and lessen nutrition troubles. The work has progressed far enough to warrant this statement, but best rotation and the most economical combination of nutrition for each particular crop and locality are yet to be determined.	<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>  <b>PROJECTS—continued.</b>  (3) Truck-crop investigations.... \$7,020.00	<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>  <b>PROJECTS—continued.</b>  (3) Truck-crop investigations... \$12,300.00 The increase of \$5,280 is desired to meet the increasing demands upon our investigators in connection with such crops as Irish potatoes, sweet potatoes, onions, and tomatoes to carry on work in various sections.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.	ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.	ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(4) Truck-crop survey..... \$847.30 This work consists of special studies of the distribution, season of maturity, time of planting, and methods of marketing cabbage, celery, onions, potatoes, and many other truck crops. The objects are the collection of data showing the acreage planted, the time of planting and the condition of the crops in the various crop zones at stated intervals. This information will aid in recommending the acreage to be planted of any particular crop in any given crop zone. The condition in which various shipments of truck arrive at the markets is also being studied, with a view to the improvement of methods of marketing. <i>Results.</i> —These studies have made possible the publication of farmers' bulletins on tomatoes, cucumbers, beans, celery, onions, peanuts, strawberries, raspberries, okra, sweet potatoes, potatoes, cabbage, and on the home vegetable garden. Bulletins on other crops are in preparation. Maps showing the approximate zones for various crops have been compiled, and a great quantity of data regarding truck practices, time of planting, harvesting, as well as systems of marketing, has been secured. The survey work brings to light the important problems connected with the trucking industry in each of the several regions, thus furnishing a guide for future investigations. Cooperative marketing organizations in the truck industry have been studied, and many highly successful cooperative agencies of this kind have come under observation. One of the most promising tendencies of the day is the spirit of cooperation and mutual helpfulness which is beginning to manifest itself among the producers of truck crops. The successful organization and working of cooperative marketing companies or exchanges by farmers has proved the possibility as well as the desirability of a system of marketing which shall have headquarters at the point of production.	(4) Truck-crop survey..... \$530.00	(4) Truck-crop survey..... \$530.00
(5) Production and improvement of bulbs and flower and vegetable seeds in the United States..... 9,390.92 This work includes the testing of samples of all seeds used in the congressional distribution, together with the novelties offered by the seed trade, and also a study of special groups of vegetables for the purpose of determining varietal distinction and distribution, and the practical value of the respective sorts. The objects are to classify the varieties of vegetables so as to show synonyms and to simplify the nomenclature, and to breed new and distinct types of standard varieties with qualities or characters fitting them to particular commercial requirements. The work has an additional object of determining the purity and germinating power of seeds secured for distribution. In addition to this special investigations are under way to determine the best methods of handling seed sweet corn and sweet corn for canning purposes. A field study is being made of the methods of growing standard commercial varieties of flower and vegetable seed, and in addition to this investigations are under way to determine the possibility of growing Dutch bulbs in the United States, as well as producing so-called Easter lilies from seed in order that disease-free stock may be had by the florists for forcing purposes. <i>Results.</i> —The testing of some 5,000 so-called distinct varieties of vegetables has shown that in a great many cases seedsmen send out under distinct varietal names stocks whose only difference is the degree to which they conform to some particular varietal character, and that the use of different varietal names to distinguish what are in reality simply different grades or strains of the same sort is a very common practice of even our best and most reliable seed firms. Tests of the seeds used in the congressional seed distribution have shown that they are quite equal in varietal character to those commonly used by seedsmen for their retail trade.	(5) Production and improvement of bulbs and flower and vegetable seeds in the United States..... 9,820.00	(5) Production and improvement of bulbs and flower and vegetable seeds in the United States..... 9,820.00
(6) Forcing house investigations..... 4,046.18 This work consists of a study of the conditions favoring the forcing of plants grown under glass. Careful studies are being made of the quantitative relations existing between the rate of growth, periodicity of growth, and transpiration in various economic plants, with a view to using these plants as interpreters of climatic conditions in the open, as well as to determine the adaptability of plants to various environments. The main object is to secure definite information on the quantitative relations existing between heat, light, and moisture in the growth of economic plants, and to determine the conditions of environment which should be maintained by commercial florists to secure a maximum development in the various crops grown under glass. In addition to this special strains of forcing crops, such as roses, carnations, lettuce, tomatoes, and cauliflower, are being developed.	(6) Forcing house investigations.. 4,130.00	(6) Forcing house investigations. 4,130.00

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>	<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>	<b>ARLINGTON EXPERIMENTAL FARM AND HORTICULTURAL INVESTIGATIONS—Continued.</b>
<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>	<b>PROJECTS—continued.</b>
<p><i>Results.</i>—Good progress is being made in these investigations, but it is still too early to draw definite conclusions. The indications are that the adaptation of plants to severe winter conditions or to trying arid conditions can be foretold by laboratory studies. It is also believed that by the use of flowering wood for propagating purposes, the yield of flowers from greenhouse roses can be materially increased; also that profits from carnations can be decidedly increased by using only plants producing a large number of flowers as mother plants.</p> <p>An improved strain of forcing lettuce has been developed, which is now being tested by commercial growers.</p> <p>A special strain of tomato for forcing purposes is receiving attention, and it is hoped that it may be placed in the hands of commercial growers another year.</p> <p>The results so far obtained with cauliflower indicate that the seed of this crop, which has never been successfully produced in America, can be grown to advantage under greenhouse conditions.</p>		
(7) Peanut investigations..... \$2,439.96	(7) Peanut investigations..... \$1,860.00	(7) Peanut investigations..... \$3,860.00
<p>The objects of this work are to encourage the growing of peanuts both as human food and stock food. Extensive varietal plantings have been made, and a careful study of the industry is under way, with the idea of introducing improved machinery which will lessen the cost of producing the crop. Special attention is being given to the extension of the industry into the cotton States, with a view to the development in that region of a crop which will be the means of maintaining live stock. Some attention is also being given to the study of methods of producing peanut oil.</p> <p><i>Results.</i>—A rapid extension is taking place in the culture of peanuts, and the indications are that the crop is to play an important part in the farm practices of the Southwest in the way of stock food. The plant is the only one known which produces a perfectly balanced ration for a dairy cow. The value and importance of this crop justify large expenditures for the encouragement of its culture through the Southern States. A bulletin on peanut culture has been issued, covering methods of growing, harvesting, and marketing the crop.</p> <p>Imported varieties of peanuts from various parts of the world, including the famous peanut regions of the Gold Coast of Africa, have been grown and compared with varieties now growing in this country. An experiment has been inaugurated to determine the commercial possibilities of the production of peanut oil in the United States. The crop grown the second year from one variety of imported seed showed an oil content of nearly 54 per cent, which is considerably above the average found in American nuts. Investigations and tests of machinery required in the manufacture of oil from peanuts have been begun and both oil-mill owners and farmers in the boll-weevil districts of Louisiana and Texas, where soil conditions are favorable to the peanut, have been encouraged to undertake extensive experiments in peanut-oil production.</p> <p>This crop has proved to be one of the most satisfactory cash crops introduced into the boll-weevil districts. The acreage is very rapidly increasing, and the demands upon the department for instruction and assistance far exceeds its ability. It is believed that in this critical stage of the development of this crop every effort should be made to prevent errors and mistakes in its planting and cultivation, for it is destined, we believe, to be one of the most potent factors in relieving the strained conditions in the boll-weevil districts.</p>		<p>The increase of \$2,000 is desired for the purpose of taking care of the increasing demands for the work in the sections infested by the boll weevil and where it is believed that peanut culture will play an important part.</p>
<b>FOREIGN SEED AND PLANT INTRODUCTION.</b>	<b>FOREIGN SEED AND PLANT INTRODUCTION.</b>	<b>FOREIGN SEED AND PLANT INTRODUCTION.</b>
(David Fairchild, agricultural explorer, in charge.)	(David Fairchild, agricultural explorer, in charge.)	(David Fairchild, agricultural explorer, in charge.)
Salaries, statutory..... \$4,750.00	Salaries, statutory..... \$7,520.00	Salaries, statutory..... \$15,260.00
Salaries, lump-fund..... 41,905.27	Salaries, lump-fund..... 34,141.67	Salaries, lump-fund..... 40,340.00
Miscellaneous expenses and supplies..... 9,355.38	Miscellaneous expenses and supplies..... 6,038.73	Miscellaneous expenses and supplies..... 10,675.00
Traveling and field expenses..... 11,978.84	Traveling and field expenses..... 24,549.60	Traveling and field expenses..... 21,475.00
Total expenditures..... 67,989.99	Total..... 72,250.00	Total..... 87,750.00
Outstanding liabilities..... 2,262.47		
Total expenditures and liabilities..... 70,252.46		

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>(1) General direction of plant introductions and projects connected therewith.....<sup>1</sup> \$23,282.22</p> <p>Under this project is carried on the work of securing through correspondents in all parts of the world, new and valuable seeds and plants for the experimenters of this country. Through years of search the office has placed itself in touch with botanists, agriculturists, scientific institutions, commercial firms, travelers, and explorers all over the world, and is now in position to secure quickly from any part of the globe any plant which may be desired by a plant experimenter at one of the State agricultural experiment stations or by an individual plant breeder. To this project is also charged the expert scientific assistance required in the careful placing through correspondents in this country of the thousands of new seeds and plants that are imported, not only through foreign correspondents, but by the agricultural explorers sent out by the Bureau, and also the general supervision of the entire office of foreign seed and plant introduction.</p> <p><i>Results.</i>—Owing to the perfecting of the machinery of plant introduction, an increase of 18 per cent has been made and as great or greater increase in the distributions to experimenters. Among the most promising introductions of this year which, however, have not yet been thoroughly tested, may be mentioned the plant producing the size used by Japanese paper manufacturers; five distinct species of persimmons from Trinidad, India, Mexico, Mauritius, and Cochin China, for the breeders of the large-fruited, new astringent, persimmons; a collection of winter melons of the Cas-saba type; the Marasco cherry from Dalmatia; a remarkable collection of Mexican field corn; two hardy strains of alfalfa, as yet untested, from Samara, Russia, and the Shensi Province of China; the nan-mu tree of the Yangtse Valley, one of China's most highly prized wood-producing trees; and the Black Monukka seed-less grape from India.</p>	<p>(1) General direction of plant in-troductions and projects connected therewith.....<sup>2</sup> \$25,981.00</p>	<p>(1) General direction of plant in-troductions and projects connected therewith.....<sup>3</sup> \$30,031.00</p> <p>The increase of \$5,050 is de-sired to take care of the in-creasing number of intro-duc-tions which are being made, the increase being 58 per cent this year more than last, while the volume of corre-spondence has increased over 30 per cent and is constantly getting larger. Furthermore, the general supervision of four new gardens necessitates an increase in the clerical work of the office, while an increase in the distribution of over 300 to 400 per cent has necessitated the installation of new machinery and card indices.</p>
<p>(2) Agricultural explorations in foreign countries..... 6,760.55</p> <p>Under this project trained agricultural explorers are sent out in search of new seeds and plants, with in-structions to purchase and import such as are believed capable of assisting in the solution of some one of the problems of crop diversification in which the official and private experimenters of the country are interested, or to make suggestions regarding the introduction of en-tirely new plant industries. Out of this project is paid the cost of travel and subsistence; salary of explorers, interpreters and guides; purchase of seeds and plants; photographic materials; and the transportation of the collections from the interior of foreign countries and their shipment to America. The project covers ex-plorations in Russia, the Caucasus, and Central Asia for hardy fruits for the Northwest; in South America for dry land and wild potatoes; in Palestine for the origi-nal dry-land wheats and alkali resistant fruit stocks; in South China and India for new citrus fruits and new stocks for breeding; in Australia for promising va-rieties of the citrus family; in Japan for new fruits and vegetables; in Manchuria for new cereal and oil-pro-ducing plants; and East Africa for new subtropical fruit plants.</p> <p><i>Results.</i>—Although not more than three explorers have ever been sent out in one year, they have in the past discovered a large number of plant possibilities. They have investigated the agricultural resources of many of the most important cultivated regions of the world, and have furnish-d descriptions of value to American cultivators of the practices of foreign farmers. They have explored many wild regions for the relatives of our cultivated plants whose possibilities have not even been described in our literature.</p> <p>More than 7,000 different and carefully selected things have been sent in by these explorers, including dry-land wheats, which have proved extremely profit-able; two of the most profitable oats now grown in the Northwest; dry-land sorghums which are especially drought resistant; strains of alfalfa from Turkestan, which are harder than the ordinary sorts, and others from Arabia and Ecuador, which produce 25 per cent more forage under irrigation in the Southwest than ordinary varieties; the new seedless grape, <i>Sultannia rosea</i>, which has been pronounced by expert grape growers in California to be superior in color and size to the Thompson Seedless, which is one of the great grapes of California; and many other things of great promise for the development of profitable new industries.</p>	<p>(2) Agricultural explorations in foreign countries..... 10,603.00</p>	<p>(2) Agricultural explorations in foreign countries..... 15,503.00</p> <p>The increase of \$5,000 is de-sired for the purpose of ex-ploring the date regions of Nubia and Morocco, not here-tofore explored, for the pur-pose of seeking better adapt-ed varieties of dates for the Southwest, and also for the purpose of investigating the mango industry of India to determine what the best va-rieties for Florida, where the industry has now reached a commercial stage.</p>

<sup>1</sup> Includes statutory salaries amounting to \$4,030.50.

<sup>2</sup> Includes statutory salaries amounting to \$6,800.

<sup>3</sup> Includes statutory salaries amounting to \$8,960.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>Mr. Frank N. Meyer has completed the first year of what was planned to be a three years' exploration of Central Asia and has already sent in from the Crimea, the Caucasus, and Bokhara, en route to Chinese Turkestan, a wild almond which he suggests as a stock for stone fruits in dry regions; the Erivan alfalfa, a strain reported to be longer lived even than the Turkestan in the Caucasus; a species of <i>Medicago</i> which is being incorporated into the drought-resistant hybrid alfalfas for the Northwest; olive cuttings from unusually hardy trees in the Crimea; a remarkable collection of hard-fleshed table grapes; a collection of apricots containing sweet edible kernels; a drought-resistant Paradise apple, used for dwarfing purposes, from its original home in the Caucasus; a collection of Caucasian cherries and a collection of winter wheats from the oasis of Samarkand.</p> <p>By means of a cooperative arrangement with the the Jewish Experiment Station at Haifa, Palestine, a collection of wild wheats and barleys and a drought-resistant stock for dwarfing early pears have been secured and are now being experimented with, as well as special varieties of the chickpea, a leguminous field crop adapted to certain of the dry farming areas of the West.</p>		
(3) Inventory and record of new plant introductions and distributions..... <sup>1</sup> \$6,192.08	(3) Inventory and record of new plant introductions and distributions..... <sup>1</sup> \$6,915.00	(3) Inventory and record of new plant introductions and distributions..... <sup>2</sup> \$6,915.00
<p>Under this project are grouped the expenses necessary for the identification and the publication of the description of all new plant introductions, and also the records of the placing of every new seed or plant in the hands of experimenters. Every plant or seed that is received (they arrive at the rate of 8 to 10 shipments a day) has to run the course of an assistant who numbers it, an entomologist and pathologist who inspect it, a botanist who makes sure that it is properly named, and an expert who cleans or disinfects it. When it is sent out to the experimenter a permanent record is kept of the distribution.</p> <p><i>Results.</i>—Twenty inventories have been published and three are now in the hands of the printers. These contain the printed descriptions of more than 28,000 different introductions. These form a volume of about 2,000 pages, in which is brought together an immense amount of valuable information regarding the whereabouts of new and valuable plants, as well as of their uses and the methods of their cultivation in foreign countries. A historical record of the distribution of hundreds of thousands of plants all over the United States has been made, and this is proving of great value in tracing introductions which later have turned out to be of value to the farmers and fruit growers.</p>		
(4) Plant introduction garden, Chico, Cal..... 11,202.21	(4) Plant introduction garden, Chico, Cal..... 10,530.00	(4) Plant introduction garden, Chico, Cal..... <sup>3</sup> 11,730.00
<p>This garden consists of 89 acres, 59 of which are actually planted with newly introduced fruit, forage, grain, or root crops. The facilities of the garden include a nursery, seed beds, greenhouses, lath houses, and economic collections of newly imported plants. A special object of the garden is the immediate handling of plant shipments from the Orient. Here these plants are propagated and prepared for distribution to various parts of the country, particularly to the milder portions.</p> <p><i>Results.</i>—Many thousands of new introductions have been propagated at this garden and distributed widely over the country. Among the most important are the Chinese wood oil plant; the wild peach of China, now being tested as a stock for stone fruits; a collection of timber bamboos from Japan; the propagation of imported varieties of the pistache nut; the establishment of varieties of the Mediterranean carob; the maintenance of the largest collection of fig varieties in the country; the fruiting of the Chinese jujube trees, promising new dry-land orchard fruits; the testing out of several hundred varieties of imported cereals and the preliminary testing and production of seed for distribution of a large proportion of the new forage-crop introductions, notably strains of alfalfa, bur clovers, and grasses.</p>		<p>The increase of \$1,200 is desired for the erection of a water tank and tower and for an extension of the irrigating system, it being found necessary to expand the cultivated area of the garden in order to care for the large increase in the number of new introductions.</p>
(5) Mississippi Valley plant introduction garden, Ames, Iowa..... 2,357.78	(5) Mississippi Valley plant introduction garden, Ames, Iowa..... 900.00	(5) Mississippi Valley plant introduction garden, Ames, Iowa..... 1,400.00
<p>This garden has been established for three years, and now contains valuable collections of wild species and varieties of the apple, pear, peach, cherry, plum, and hardy ornamentals. The object of the garden is to propagate and distribute young plants of these new introductions to experimenters in the great Mississippi region where there is a great demand for hardy plants of all kinds and where there are a large number of plant breeders who at the present time are endeavoring to develop hardier varieties of fruits which will withstand the severe climate of this region.</p>		<p>The increase of \$500 is desired for additional equipment for taking care of the increasing amount of material which will be handled at the garden the coming year and for additional labor.</p>

<sup>1</sup> Includes statutory salaries amounting to \$720.<sup>2</sup> Includes statutory salaries amounting to \$1,920.<sup>3</sup> Includes statutory salaries amounting to \$1,200.

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Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailled expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<div>FOREIGN SEED AND PLANT INTRODUCTION—Continued.</div> <div>PROJECTS—continued.</div> <div><p><i>Results.</i>—Seventy-seven apple and crab-apple introductions and 27 of the pear, representing wild, cold, and drought-resistant forms gathered by explorers, have been established there. One of the wild pears has already shown remarkable vigor and hardiness, and is worthy of testing as a stock for less hardy cultivated varieties of the pear. In the collection of peaches the new Chinese wild peach has proven of unusual hardiness and is being tested as a stock and is considered desirable for crossing with cultivated peaches to develop hardier strains than now exist.</p><p>(6) Cooperative work on subtropical fruits in southern Florida..... \$5,014.37</p><p>This work, formerly confined to the subtropical garden at Miami, Fla., has undergone some necessary modifications during the past year. Efforts will hereafter be concentrated on a few products that experience has shown to be of special value, such as the mango, avocado, anona, and guava. Arrangements have been made with fruit growers in Miami and in southern Florida generally for cooperative work with these subtropical plants, so that the Government supply for distribution will be adequate.</p><p><i>Results.</i>—Fourteen of the 75 imported East Indian mango varieties now growing in Florida have been fruited. One of these will prolong the mango season 6 weeks, ripening as late as September. Two cooperative mango and avocado plantations have been established and an inspection of the private mango plantings in Florida has been made and the best seedling varieties of avocado, thick skinned, superb flavored strains of late ripening and early ripening character, have been gathered together for propagation. The great obstacle heretofore to the rapid dissemination of both avocado and mangoes has been the difficulty of quick propagation. The improved new method of budding these fruits has largely removed this obstacle to a rapid extension of their cultivation and has opened up a new and profitable field for the nursery industry.</p><p>(7) Bamboo investigations..... 1,987.93</p><p>There is no more universally useful plant in the world than the bamboo, and in the Orient the number of its uses are counted by the hundred. It is the object of this project to establish in this country groves of this remarkable plant, so that its unique timber, which is not like that of any of our forest trees, can be studied by the manufacturers of a great variety of different things in connection with which it is believed this peculiar material will find a use. The value of the bamboo as a new vegetable is also being given attention, since the young shoots of the plant form not only one of the dearest vegetables in the Orient, but one of those most appreciated by Occidentals.</p><p><i>Results.</i>—Five acres of a 20-acre bamboo garden have been planted with two of the best Japanese and three Chinese timber species of bamboo, at Brooksville, Fla. These have made a satisfactory growth and the plants are rapidly establishing themselves. In addition a 1-acre grove has been planted at Avery Island, La. The material for a rapid propagation for experimental purposes of these remarkably useful plants is now in possession of the department and it is believed that an important discovery in the rapid propagation of the plants has been made, so that as quickly as possible the commercial value to the southern farmers of the oriental bamboo will be worked out and the washed hillsides and canebrake lands thoroughly tested as sites for bamboo groves.</p><p>(8) Miscellaneous plant introduction problems..... 607.19</p><p>Under this project are grouped a number of problems which are being carried forward to a stage where they will be worthy of special and more extensive investigation. These include the jell producing plants, guava and roselle, in Florida; the Japanese salad plant, udo; the root crop dasheens in the Carolinas; the tropical leitchee nut in Porto Rico; the hard-shelled Spanish almond in California; the globe artichoke and chayote in Louisiana; the Chinese wood oil tree in the Gulf States and California; new varieties of loquat in California and Florida; and the mangosteen in Panama.</p><p><i>Results.</i>—Several hundred bushels of dasheens have been produced in the Carolinas, enough to afford an opportunity for the large hotels to test it as a change from the ordinary potato on the menu. The new salad plant, udo, has been forced successfully and a plantation of several acres set out by a commercial asparagus grower in California. Successful introductions of cork oak acorns have been made and placed in the hands of the foresters in the forest reservations of the Southwest. The hard-shelled Spanish almond</p></div>	<div>FOREIGN SEED AND PLANT INTRODUCTION—Continued.</div> <div>PROJECTS—continued.</div> <div><p>(6) Cooperative work on subtropical fruits in southern Florida..... \$6,535.00</p><p>(7) Combined with project No. 6, cooperative work in southern Florida, and project No. 8, miscellaneous plant-introduction problems.</p><p>(8) Miscellaneous plant-introduction problems..... 1,686.00</p></div>	<div>FOREIGN SEED AND PLANT INTRODUCTION—Continued.</div> <div>PROJECTS—continued.</div> <div><p>(6) Cooperative work on subtropical fruits in southern Florida..... \$18,285.00</p><p>The increase of \$1,750 is desired to provide greater facilities for the rapid propagation of East Indian mangoes and avocado in order to meet the demand for plants by special experimenters.</p><p>(7) Combined with project No. 6, cooperative work in southern Florida, and project No. 8, miscellaneous plant-introduction problems.</p><p>(8) Miscellaneous plant-introduction problems..... 1,686.00</p></div>

<sup>1</sup> Includes statutory salaries amounting to \$2,340.

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## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.	FOREIGN SEED AND PLANT INTRODUCTION—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<p>has fruited repeatedly in the desert region of California, bearing excellent nuts. The Chinese wood oil trees have proven unexpectedly precocious and their commercial possibilities are being investigated by private individuals. New varieties of the loquat, the result of crosses between imported Alberian and Japanese varieties, are growing satisfactorily in a special plantation in California.</p> <p>(9) Special barley investigations..... \$1,911.26</p> <p>The objects of this work are to ascertain the best types of malting barleys and to what classes of soil they are specifically adapted; to determine what kernel and other characteristics compose an ideal malting barley; and to test the already known pedigreed types of this grain and to produce by breeding and selection other pure races which will be adapted to the peculiar needs of this special industry and to the peculiar requirements of different soils. The relatively inferior quality of American barleys, compared with those of Europe, is generally recognized. These investigations are therefore of special importance, since we can never successfully compete with other countries, either in raw grain or its products, until the quality and uniformity of our barleys are greatly improved.</p> <p><i>Results.</i>—From laboratory studies an entirely new point of view from which to consider all malting barleys has been obtained, and the presence of what should be termed the malting organ of the barley kernel has been emphasized, and the biological analysis of the grain as distinct from the old chemical analysis of the grain has been established. The acclimatization of the pedigreed Swedish and English barleys in the Northwest has been carried so far as to show the great superiority of certain types for certain classes of soils, and the necessity of finding for each region the variety which is particularly suited to it instead of endeavoring to make the farmers grow on all classes of soil a single variety because it is a well-known one.</p> <p>(10) Inspection and quarantine facilities for plant-introduction work..... 1,936.87</p> <p>The bringing of new plants from abroad is always fraught with danger—the danger of introducing some new insect, bacterial, or fungous pest which will do serious damage to the crops of the country. Although every plant and all the seeds which are imported by the Government are submitted for inspection on their arrival, there are cases of an obscure nature in which no pathologist can determine, until the plants or seeds have been grown, whether the suspicious appearances which are discovered are those of a dangerous disease or not. For the maintenance and observation of such plants increased quarantine facilities have been provided.</p> <p>(11) South Texas garden..... 9,100.00</p> <p>This garden has for its object the propagation and preliminary testing of such newly introduced seeds and plants as are believed to be adapted for cultivation in the southwestern country. It is located on the Fort Brown Military Reservation.</p> <p><i>Results.</i>—It requires several years to get a propagating and testing garden into working order. The main preliminaries have been accomplished and the very important bearing on the problem of the substratum of alkaline soil which underlies the garden has been discovered. Already several interesting plants of value have been found among the large number sent for trial. It is universally admitted among planters of southern Texas that a good windbreak is a valuable thing; one of the East Indian imported bamboos has made a most satisfactory windbreak at the garden. The Chinese pistache, one of the best shade and ornamental trees, and a promising stock for the pistache nut of commerce, appears to resist the root rot which is prevalent in the garden. The Chinese jujubes, peculiarly drouth-resistant fruit-bearing plants, have made an excellent growth and appear to be adapted to the region. Three-year-old plants of the Chinese wax tree have borne a good crop of seeds, proving their adaptability to south Texas conditions, and investigations as to the commercial value of this wax are being made.</p>	<p>(9) Discontinued.</p> <p>(10) Combined with project No. 1.—General direction of plant introductions and projects connected therewith.</p> <p>(11) South Texas garden..... \$9,100.00</p>	<p>(11) South Texas garden..... \$12,100.00</p> <p>The increase of \$3,000 is desired for the purpose of providing underdrainage in the garden, which is made necessary on account of the presence of underlying alkaline strata which render it unsuitable for propagating and testing purposes. In the course of 3 years of irrigation this alkali has been brought to the surface and has interfered most seriously with the work of plant propagation and invalidated many of the tests attempted.</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282; to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Plant Industry—Continued.

OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<div>FORAGE CROP INVESTIGATIONS.</div> <div>(C. V. Piper, agronomist in charge.)</div> <div>Salaries, statutory.....\$3,150.00</div> <div>Salaries, lump fund.....19,361.16</div> <div>Miscellaneous expenses and supplies.....3,503.93</div> <div>Traveling and field expenses.....4,677.90</div> <div>Total expenditures.....30,692.99</div> <div>Outstanding liabilities.....230.25</div> <div>Total expenditures and liabilities.....30,923.24</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....15,802.28</div> <div>This project includes the planning and general supervision of the field work, the carrying on of correspondence, and other necessary details connected with the work.</div> <div>Results.—The results under this project are reflected in the progress noted under all of the other projects described in the following paragraphs.</div> <div>(2) Alfalfa and clover testing and distribution.....4,880.55</div> <div>The work with alfalfa is conducted principally along two lines, namely, the extension of alfalfa culture in the East and the testing and introduction of improved varieties in the West. So far as possible, the distribution of seed is followed up by field agents who study the successes and failures with the view of further distributions. The work with red clovers is largely the testing and extension of different strains in the area where "clover-sick" lands abound, i. e., lands which formerly grew ordinary red clover but now, for some reason, do not grow it.</div> <div>Results.—In the East, the distribution work has resulted in a great increase in the acreage of alfalfa. The absolute needs of this crop in the East are an abundance of lime in the soil, inoculation with the nodule-forming bacteria, proper preparation of the seed bed, and proper time of sowing in order to obviate weeds. The date of planting varies with the latitude. In practically all parts of the East where co-operators give proper attention to these details alfalfa is a success. It is particularly successful in the limestone regions. It is estimated that the acreage of alfalfa in the East has been increased fourfold within the past three years.</div> <div>In the West about 500 strains secured from all parts of the world have been under comparative tests, and in some cases the most promising individuals have been selected from these for increase. Marked superiority is obtained in this way, and large quantities of seed of the best strains are being grown for distribution, especially of the new hardy strains which succeed in the northernmost States and of the Peruvian and Arabian varieties which in the extreme Southwest grow with much greater rapidity than ordinary alfalfa and also grow earlier in the spring and later in the fall.</div> <div>Varieties especially adapted for producing seed under dry conditions have been distributed through semi-arid regions, and the cultivation of the crop has been urged. It is found that alfalfa seed can be raised very successfully by those growing the crop, and a large acreage has now been planted in this manner. This not only adds an important crop to dry-land farming, but promises in the near future to supply all the alfalfa seed needed in this country and also to provide a surplus.</div> <div>(3) Grass seed testing and distribution.....5,265.63</div> <div>The object of this work is to secure better grasses for hay and pasture for different sections of the country, especially the South and West, and to bring about the use of improved mixtures so as to secure larger yields in all parts of the country. Especial attention has been paid to our most important grass, timothy, of which a large number of strains exist, the object being to determine the best kinds and then to distribute large quantities of seed.</div> <div>Results.—Among the new grasses which have been found valuable by recent tests, or which have been extended in cultivation through this work, are Para grass, Rhodes grass, Natal grass, molasses grass, and Sudan grass. All of these are particularly adapted to the Southern States, the first 4 mainly to Florida and the Gulf coast. Rhodes grass and molasses grass are particularly promising hay grasses in Florida, and in all likelihood will solve the problem of growing suitable hay in that State. The use of Para grass has been greatly increased in the last few years by the extensive distributions in all of the area to which it is adapted. It is becoming a more and more important commercial hay grass each year. Sudan is a new grass from central Africa having all of the merits of Johnson grass but is as easily controlled as timothy. It is adapted to the entire cotton belt and to the southern portions of the arid regions, being very drought resistant. Large quantities of seed are being grown for general distribution.</div>	<div>FORAGE CROP INVESTIGATIONS.</div> <div>(C. V. Piper, agronomist in charge.)</div> <div>Salaries, statutory.....\$4,020.00</div> <div>Salaries, lump fund.....16,537.00</div> <div>Miscellaneous expenses and supplies.....3,333.00</div> <div>Traveling and field expenses.....5,730.00</div> <div>Total.....29,620.00</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....5,620.00</div> <div>(2) Alfalfa and clover testing and distribution.....6,120.00</div> <div>(3) Grass seed testing and distribution.....5,380.00</div>	<div>FORAGE CROP INVESTIGATIONS.</div> <div>(C. V. Piper, agronomist in charge.)</div> <div>Salaries, statutory.....\$4,020.00</div> <div>Salaries, lump fund.....15,937.00</div> <div>Miscellaneous expenses and supplies.....3,333.00</div> <div>Traveling and field expenses.....5,730.00</div> <div>Total.....29,020.00</div> <div>PROJECTS.</div> <div>(1) General supervisory and office work.....5,620.00</div> <div>(2) Alfalfa and clover testing and distribution.....6,120.00</div> <div>(3) Grass seed testing and distribution.....5,380.00</div>

1 Includes statutory salaries amounting to \$3,150.

2 Includes statutory salaries amounting to \$4,020.

3 Includes statutory salaries amounting to \$4,020.

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282; to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
FORAGE CROP INVESTIGATIONS—Continued.	FORAGE CROP INVESTIGATIONS—Continued.	FORAGE CROP INVESTIGATIONS—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(4) Testing and distribution of dry-land forage crops..... \$2,000.00 This work is conducted along two lines, namely, the search for new grasses or legumes adapted to dry-land conditions, and the testing of such varieties under different methods likely to prove successful, with a view to the distribution of seed. The tremendous development in dry-land farming which has taken place in the past five or six years has resulted in a great demand for better forage crops or better methods for growing the same under the conditions presented. <i>Results.</i> —Among the most striking results obtained in growing forage crops on dry lands have been those with the sorghums. In this work more than 500 varieties from all parts of the world have been tested, demonstrating that several not before known in American agriculture have very high value. Among these may be mentioned pink kafir, red amber sorghum, and Feterita, the last a variety with very large white grains from central Africa. Large quantities of seed of these sorghums, as well as improved strains of black-hulled kafir, dwarf milo, and sumac sorghum, have been distributed and the results correlated. The Canada pea is also a valuable dry-land crop from Oklahoma northward, and varieties from all parts of the world are being tested. Three of these, all new to this country, have shown superiority, and large quantities of seed of these varieties are being grown for distribution in order to establish them throughout the dry-land farming region. In the testing of alfalfa and grasses by different methods, it is found that these crops can be grown profitably in cultivated rows where the yield is too light to justify their culture by ordinary methods. In the cases of a number of the perennial grasses the yield obtained in this way is more than double that obtained by broadcasting. It is estimated that where such yields reach 2 tons per acre, which can be accomplished over much of the dry-land region, this method of growing grasses for hay is profitable.	(4) Testing and distribution of dry-land forage crops..... \$6,350.00	(4) Testing and distribution of dry-land forage crops..... \$6,350.00
(5) Testing and distribution of miscellaneous forage crops.. 12,974.78 This project covers all work with forage crops not referred to in the foregoing paragraphs. It involves the testing of different sorts of forage crops from all parts of the world, and especially the testing and distribution of cowpeas, soy beans, velvet beans, bur clovers, and vetches. <i>Results.</i> —In the work with cowpeas more than 400 varieties have been tested from all parts of the world, with the view of determining the best for distribution and for further improvement. This has resulted in the general introduction of two hybrid varieties, the Brahman and Groit, which possess high superiority. Quantities of seed of the new sorts are being distributed. In the work with soy beans about 500 varieties, mostly from Asia, are under test. The results have limited the most valuable varieties to comparatively few, the seed of which is being distributed in quantity. The soy-bean crop is increasing in prominence, especially in the South. The velvet bean is an important forage crop in Florida and for some distance northward. Recent tests have disclosed the existence of about 12 other varieties or species allied to the velvet bean, one of which matures as far north as Kansas and Maryland. Seed of several of these varieties has been distributed or is being grown in quantity for distribution. Bur clover is an important winter forage crop in California and in the Southern States and its cultivation is being encouraged by the distribution of seed. Similar work is being conducted with the vetches, with special reference to the production of seed by farmers.	(5) Testing and distribution of miscellaneous forage crops.. 6,150.00	(5) Testing and distribution of miscellaneous forage crops.. 5,550.00
SEED DISTRIBUTION. (Directed by chief of bureau.)	SEED DISTRIBUTION. (Directed by chief of bureau.)	SEED DISTRIBUTION. (Directed by chief of bureau.)
Salaries, statutory..... \$16,591.00 Salaries, lump-fund..... 20,848.34 Miscellaneous expenses and supplies..... 220,492.47 Traveling and field expenses..... 2,060.61 Total expenditures..... 259,992.42 Outstanding liabilities..... 6,803.85 Total expenditures and liabilities..... 266,796.27	Salaries, statutory..... \$19,760.00 Salaries, lump-fund..... 23,521.75 Miscellaneous expenses and supplies..... 212,350.50 Traveling and field expenses..... 3,550.00 Total..... 259,182.25	Salaries, statutory..... \$35,110.00 Salaries, lump-fund..... 7,733.00 Miscellaneous expenses and supplies..... 231,629.25 Traveling and field expenses..... 3,350.00 Total..... 277,822.25

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282; to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Plant Industry—Continued.

## OFFICES, LABORATORIES, AND PROJECTS—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>SEED DISTRIBUTION—Continued.</b>	<b>SEED DISTRIBUTION—Continued.</b>	<b>SEED DISTRIBUTION—Continued.</b>
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(1) Administrative and miscellaneous expenses..... 19,405.36 This project includes the necessary expenses in supervising the seed distribution, the office work and correspondence, and various other details connected with the work.	(1) Administrative and miscellaneous expenses..... 26,020.00	(1) Administrative and miscellaneous expenses..... 23,722.25
(2) Congressional distribution of seeds and plants..... 238,948.33 This work includes the annual distribution of vegetable, flower, cotton, tobacco, grass, leguminous, and other seeds, as well as bulbs, grapevines, and strawberry plants.	(2) Congressional distribution of seeds and plants..... 222,752.25	(2) Congressional distribution of seeds and plants..... 243,690.00
(3) Sugar beet seed growing and distribution..... 3,277.98 This project consists of the distribution of select varieties of sugar beet seed on Congressional and other request, and also of the testing and propagation of sugar beet seed in this country with a view to the development of a domestic source of supply for high-grade sugar beet seed.	(3) Sugar beet seed growing and distribution..... 3,690.00	(3) Sugar beet seed growing and distribution..... 3,690.00
(4) Bulb propagating garden, Bellingham, Wash..... 5,164.60 The object of this garden is to ascertain the possibilities of the production of Dutch bulbs in the Puget Sound region, with a view to the development of an industry which will supply the needs of the seed distribution, as well as a part of the demand for bulbs in the seed trade. The region in question is believed to be well adapted to bulb culture, and methods of propagation are now being worked out.	(4) Bulb propagating garden, Bellingham, Wash..... 6,720.00	(4) Bulb propagating garden, Bellingham, Wash..... 6,720.00
Total classified expenditures of the Bureau of Plant Industry to Aug. 31, 1910..... 1,610,623.71		
Less repayments to credit of appropriation..... 85.33		
Net expenditures to Aug. 31, 1910..... 1,610,538.38		
Outstanding liabilities on Aug. 31, 1910..... 36,663.16		
Total expenditures and liabilities, fiscal year 1910... 1,647,201.54		
Expenditures during fiscal year 1909 from immediately available fund..... 17,366.47		
Balance to be turned back in Treasury (estimated)..... 47,664.72		
<b>Total of all appropriations of the Bureau of Plant Industry for the fiscal year 1910..... 1,712,232.73</b>	<b>Total of all appropriations for the Bureau of Plant Industry for the fiscal year 1911 (an increase over 1910 of \$45,973.27). 1,758,206.00</b>	<b>Total of all appropriations estimated for the Bureau of Plant Industry for the fiscal year 1912 (an estimated increase over 1911 of \$221,120)..... 1,979,326.00</b>

<sup>1</sup> Includes statutory salaries amounting to \$12,662.66.

<sup>2</sup> Includes statutory salaries amounting to \$14,140.

<sup>3</sup> Includes statutory salaries amounting to \$22,770.

<sup>4</sup> Includes statutory salaries amounting to \$3,028.34.

<sup>5</sup> Includes statutory salaries amounting to \$4,720.

<sup>6</sup> Includes statutory salaries amounting to \$11,240.

<sup>7</sup> Includes statutory salaries amounting to \$900.

<sup>8</sup> Includes statutory salaries amounting to \$2,100.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911.

## FOREST SERVICE.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Forest Service, \$60,200.</i>	<i>Salaries, Forest Service, \$60,200.</i>	<i>Salaries, Forest Service, \$2,318,680.</i>
Pinchot, Gifford..... } Forester, at \$5,000..... } 2,597.22	1 forester, who shall be Chief of Bureau..... 5,000.00	1 forester, who shall be Chief of Bureau (acts Feb. 1, 1905, vol. 33, p. 628, secs. 1-5; May 26, 1910, vol. 36, p. 424, sec. 1)..... 5,000.00
Graves, Henry S..... } 2,083.34	1 clerk..... 1,500.00	
Bentley, George A..... } Clerk, at \$1,500..... } 1,500.00	1 clerk..... 1,320.00	
Stahlnecker, Percy S..... } 36.67	2 clerks, at \$1,260 each..... 2,520.00	
Stockbridge, Helen E..... } Clerk, at \$1,320..... } 495.00	4 clerks, at \$1,200 each..... 4,800.00	1 administrative assistant (by transfer from lump fund for general expenses) (same acts)..... 2,000.00
Strause, Florence D..... } 660.00	5 clerks, at \$1,080 each..... 5,400.00	
Rector, L. Belle..... } Clerk, at \$1,260..... } 472.50	8 clerks, at \$1,020 each..... 8,160.00	1 forest supervisor (by transfer from lump fund for general expenses) (same acts)..... 2,700.00
Stockbridge, Helen E..... } 787.50	10 clerks, at \$960 each..... 9,600.00	
Simonson, Edith..... } Clerk, at \$1,260..... } 577.50	17 clerks, at \$900 each (increase of 5 sub-mitted)..... 15,300.00	
Stahlnecker, Percy S..... } 654.50	4 messengers, at \$660 each..... 2,640.00	5 forest supervisors, at \$2,400 each (by transfer from lump fund for general expenses) (same acts)..... 12,000.00
Echtermann, Martha M..... } Clerk, at \$1,200..... } 750.00	4 messengers, at \$360 each..... 1,440.00	
Rector, L. Belle..... } 550.00	3 watchmen, at \$840 each..... 2,520.00	
Ely, Miles W..... } Clerk, at \$1,200..... } 600.00		
Gray, Percy S..... } 550.00		
Love, Clara F..... } Clerk, at \$1,200..... } 600.00	Total..... 60,200.00	18 forest supervisors, at \$2,200 each (by transfer from lump fund for general expenses) (same acts)..... 39,600.00
Moorman, Thomas M..... } 650.00		
Simonson, Edith..... } Clerk, at \$1,200..... } 550.00		
Butler, Wm. M..... } 90.00		
Conway, Lillian T..... } Clerk, at \$1,080..... } 990.00		
Gill, Sue M..... } 495.00		
Blackley, Belle B..... } Clerk, at \$1,080..... } 585.00		
Ely, Miles W..... } 675.00		
Echtermann, Martha M..... } Clerk, at \$1,080..... } 405.00		
McFadden, Stella R..... } 585.00		
Love, Clara F..... } Clerk, at \$1,080..... } 495.00		
Rhode, Rosemary..... } 495.00		
		45 forest supervisors, at \$2,000 each (by transfer from lump fund for general expenses) (same acts)..... 90,000.00
		66 forest supervisors, at \$1,800 each (by transfer from lump fund for general expenses) (same acts)..... 118,800.00

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—*

*Continued.*

*Forest Service—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$2,318,680—Continued.</i>
Meynes, Alice M. Clerk, at \$1,080. .... \$1,080.00		10 forest supervisors, at \$1,600 each (by transfer from lump fund for general expenses) (same acts)..... \$16,000.00
Blackley, Belle B. Clerk, at \$1,020. .... 552.50		4 deputy forest supervisors, at \$1,700 each (by transfer from lump fund for general expenses) (same acts)..... 6,800.00
Van Rancke, Lillian. .... 467.50		21 deputy forest supervisors, at \$1,600 each (by transfer from lump fund for general expenses) (same acts)..... 33,600.00
Burch, John E. Clerk, at \$1,020. .... 1,020.00		30 deputy forest supervisors, at \$1,500 each (by transfer from lump fund for general expenses) (same acts)..... 45,000.00
Curtis, Maury. .... 1,020.00		41 deputy forest supervisors, at \$1,400 each (by transfer from lump fund for general expenses) (same acts)..... 57,400.00
Gannett, Mary C. .... 867.00		1 forest ranger (by transfer from lump fund for general expenses) (same acts)..... 1,500.00
Miller, Mary T. Clerk, at \$1,020. .... 127.50		17 forest rangers, at \$1,400 each (by transfer from lump fund for general expenses) (same acts)..... 23,800.00
Gerhart, Herbert B. .... 1,020.00		75 forest rangers, at \$1,300 each (by transfer from lump fund for general expenses) (same acts)..... 97,500.00
Howes, John W. Clerk, at \$1,020. .... 1,020.00		150 forest rangers, at \$1,200 each (by transfer from lump fund for general expenses) (same acts)..... 180,000.00
McFadden, Stella R. .... 637.50		9 forest rangers, at \$1,100 each (by transfer from lump fund for general expenses) (same acts)..... 9,900.00
Mosher, Edith R. Clerk, at \$1,020. .... 252.17		2 assistant forest rangers, at \$1,300 each (by transfer from lump fund for general expenses) (same acts)..... 2,600.00
Woodman, Ulah M. .... 127.50		48 assistant forest rangers, at \$1,200 each (by transfer from lump fund for general expenses) (same acts)..... 57,600.00
Rule, Mattie F. Clerk, at \$1,020. .... 1,020.00		847 assistant forest rangers, at \$1,100 each (by transfer from lump fund for general expenses) (same acts)..... 931,700.00
Barton, Mabel A. Clerk, at \$960. .... 960.00		1 property auditor (by transfer from lump fund for general expenses) (same acts)..... 1,800.00
Butler, Wm. M. Clerk, at \$960. .... 480.00		7 chiefs of maintenance, at \$1,600 each (by transfer from lump fund for general expenses) (same acts)..... 11,200.00
McLaurin, S. L. .... 440.00		1 chief of distribution (by transfer from lump fund for general expenses) (same acts)..... 1,600.00
Davidson, Augusta B. Clerk, at \$960. .... 440.00		1 clerk (by transfer from lump fund for general expenses) (same acts)..... 2,100.00
Judson, Blanche A. .... 480.00		3 clerks, at \$2,000 each (by transfer from lump fund for general expenses) (same acts)..... 6,000.00
Eisenstein, Jennie C. Clerk, at \$960. .... 98.67		11 clerks, at \$1,800 each (by transfer from lump fund for general expenses) (same acts)..... 19,800.00
Ramsaur, Sue W. .... 861.33		17 clerks, at \$1,600 each (by transfer from lump fund for general expenses) (same acts)..... 27,200.00
Emerson, Nellie E. Clerk, at \$960. .... 640.00		9 clerks, at \$1,500 each (increase of eight submitted by transfer from lump fund for general expenses) (same acts)..... 13,500.00
Hawkins, Cora J. Clerk, at \$960. .... 320.00		8 clerks, at \$1,400 each (by transfer from lump fund for general expenses) (same acts)..... 11,200.00
Flanagan, Susanna. Clerk, at \$960. .... 960.00		1 clerk (by transfer from lump fund for general expenses) (same acts)..... 1,380.00
Gartrell, Laura R. Clerk, at \$960. .... 960.00		7 clerks, at \$1,320 each (increase of six submitted by transfer from lump fund for general expenses) (same acts)..... 9,240.00
Owen, Nina. Clerk, at \$960. .... 480.00		4 clerks, at \$1,300 each (by transfer from lump fund for general expenses) (same acts)..... 5,200.00
Gonter, Clara H. .... 440.00		2 clerks, at \$1,260 each (same acts)..... 2,520.00
Shelton, Rosalie McK. Clerk, at \$960. .... 360.00		77 clerks, at \$1,200 each (increase of seventy-three submitted by transfer from lump fund for general expenses) (same acts)..... 92,400.00
Woodman, Ulah M. .... 600.00		
Wharton, Georgia E. Clerk, at \$960. .... 960.00		
Carpenter, Helen F. .... 92.50		
Eisenstein, Jennie C. Clerk, at \$900. .... 507.50		
Emerson, Nellie E. .... 300.00		
Davidson, Augusta B. Clerk, at \$900. .... 487.50		
Randal, Goldie M. .... 412.50		
Gage, Kathleen R. Clerk, at \$900. .... 900.00		
Gardner, Beryl G. Clerk, at \$900. .... 900.00		
Gonter, Clara H. Clerk, at \$900. .... 487.50		
Hoffman, Ethel T. .... 412.50		
Goldsmith, Georgia N. Clerk, at \$900. .... 412.50		
McLaurin, S. L. .... 487.50		
Irving, Esther G. Clerk, at \$900. .... 337.50		
Shelton, Rosalie McK. .... 562.50		
Jackson, Leona. Clerk, at \$900. .... 900.00		
Leech, Elizabeth B. Clerk, at \$900. .... 900.00		
Pegram, Anne H. Clerk, at \$900. .... 105.00		
Stein, Hattie. .... 775.00		
Pence, Zula F. Clerk, at \$900. .... 900.00		
Pryor, Anne A. Clerk, at \$900. .... 900.00		
Robinson, Laura J. Clerk, at \$900. .... 900.00		
Ruth, Clara. Clerk, at \$900. .... 900.00		
Simonson, Marie. Clerk, at \$900. .... 900.00		
Warren, Kate D. Clerk, at \$900. .... 900.00		
Zinnmeister, Grace M. Clerk, at \$900. .... 900.00		
Fowler, George V. Watchman, at \$840. .... 840.00		
Sullivan, Joseph F. Watchman, at \$840. .... 840.00		
Walter, W. L. Watchman, at \$840. .... 840.00		
Downey, Michael J. Messenger, at \$660. .... 660.00		
McCreight, Arthur M. Messenger, at \$660. .... 660.00		
Munchmeyer, Fred. Messenger, at \$660. .... 660.00		
Spellbring, John A. Messenger, at \$660. .... 660.00		
Caesar, Harold C. Messenger, at \$360. .... 360.00		
Fox, George H. Messenger, at \$360. .... 330.00		
Brashears, Paul H. .... 30.00		
Kuehling, Roy H. .... 272.00		
McKeever, Jesse A. Messenger, at \$360. .... 88.00		
Woertendyke, Clifford M., messenger, at \$360. .... \$360.00		
Total amount paid for salaries..... \$59,455.90		
Unexpended balance..... 744.10		
Total amount of appropriation..... 60,200.00		

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

*Forest Service—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$2,318,680—Continued.</i>
		52 clerks, at \$1,100 each (by transfer from lump fund for general expenses) (same acts)..... \$57,200.00
		7 clerks, at \$1,080 each (increase of two submitted by transfer from lump fund for general expenses) (same acts)..... 7,560.00
		17 clerks, at \$1,020 each (increase of nine submitted by transfer from lump fund for general expenses) (same acts)..... 17,340.00
		34 clerks, at \$1,000 each (by transfer from lump fund for general expenses) (same acts)..... 34,000.00
		30 clerks, at \$960 each (increase of twenty submitted by transfer from lump fund for general expenses) (same acts)..... 28,800.00
		110 clerks, at \$900 each (increase of ninety-three submitted by transfer from lump fund for general expenses) (same acts).. 99,000.00
		18 clerks, at \$840 each (by transfer from lump fund for general expenses) (same acts)..... 15,120.00
		4 clerks, at \$780 each (by transfer from lump fund for general expenses) (same acts)..... 3,120.00
		4 clerks, at \$720 each (by transfer from lump fund for general expenses) (same acts)..... 2,880.00
		1 clerk (by transfer from lump fund for general expenses) (same acts)..... 700.00
		2 superintendents of telephone construction, at \$1,500 each (by transfer from lump fund for general expenses) (same acts).. 3,000.00
		1 game warden (by transfer from lump fund for general expenses) (same acts)..... 1,400.00
		1 game warden (by transfer from lump fund for general expenses) (same acts)..... 1,200.00
		1 compiler (by transfer from lump fund for general expenses) (same acts)..... 1,600.00
		1 reader or clerk (by transfer from lump fund for general expenses) (same acts)..... 1,400.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 2,000.00
		3 draftsmen, at \$1,600 each (by transfer from lump fund for general expenses) (same acts).. 4,800.00
		2 draftsmen, at \$1,500 each (by transfer from lump fund for general expenses) (same acts).. 3,000.00
		4 draftsmen, at \$1,400 each (by transfer from lump fund for general expenses) (same act).. 5,600.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,380.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,320.00
		3 draftsmen, at \$1,300 each (by transfer from lump fund for general expenses) (same acts).. 3,900.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,260.00
		6 draftsmen, at \$1,200 each (by transfer from lump fund for general expenses) (same acts).. 7,200.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,140.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,100.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 1,080.00
		3 draftsmen, at \$1,000 each (by transfer from lump fund for general expenses) (same acts).. 3,000.00
		1 draftsman (by transfer from lump fund for general expenses) (same acts)..... 960.00
		4 draftsmen, at \$900 each (by transfer from lump fund for general expenses) (same acts).. 3,600.00

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$60,200—Continued.</i>	<i>Salaries, Forest Service, \$2,318,680—Continued.</i> 1 artist (by transfer from lump fund for general expenses) (same acts)..... \$1,400.00 1 artist (by transfer from lump fund for general expenses) (same acts)..... 1,000.00 4 map colorists, at \$900 each (by transfer from lump fund for general expenses) (same acts)..... 3,600.00 1 map colorist (by transfer from lump fund for general expenses) (same acts)..... 720.00 1 photographer (by transfer from lump fund for general expenses) (same acts)..... 1,600.00 1 photographer (by transfer from lump fund for general expenses) (same acts)..... 1,400.00 1 photographer (by transfer from lump fund for general expenses) (same acts)..... 1,200.00 1 photographer (by transfer from lump fund for general expenses) (same acts)..... 1,100.00 1 lithographer (by transfer from lump fund for general expenses) (same acts)..... 1,200.00 1 lithographer's helper (by transfer from lump fund for general expenses) (same acts)..... 780.00 1 machinist (by transfer from lump fund for general expenses) (same acts)..... 1,260.00 1 carpenter (by transfer from lump fund for general expenses) (same acts)..... 1,200.00 2 carpenters, at \$1,000 each (by transfer from lump fund for general expenses) (same acts)..... 2,000.00 1 carpenter (by transfer from lump fund for general expenses) (same acts)..... 960.00 1 electrician (by transfer from lump fund for general expenses) (same acts)..... 1,020.00 1 laboratory aid and engineer (by transfer from lump fund for general expenses) (same acts)..... 900.00 3 laboratory assistants, at \$900 each (by transfer from lump fund for general expenses) (same acts)..... 2,700.00 1 laboratory assistant (by transfer from lump fund for general expenses) (same acts)..... 800.00 1 laboratory helper (by transfer from lump fund for general expenses) (same acts)..... 720.00 1 laboratory helper (by transfer from lump fund for general expenses) (same acts)..... 600.00 1 packer (by transfer from lump fund for general expenses) (same acts)..... 1,000.00 1 packer (by transfer from lump fund for general expenses) (same acts)..... 780.00 4 watchmen, at \$840 each (increase of one submitted by transfer from lump fund for general expenses) (same acts)..... 3,360.00 1 messenger or laborer (by transfer from lump fund for general expenses) (same acts)..... 960.00 3 messengers or laborers, at \$900 each (by transfer from lump fund for general expenses) (same acts)..... 2,700.00 2 messengers or laborers, at \$840 each (by transfer from lump fund for general expenses) (same acts)..... 1,680.00 2 messengers or laborers, at \$800 each (by transfer from lump fund for general expenses) (same acts)..... 1,600.00 3 messengers or laborers, at \$780 each (by transfer from lump fund for general expenses) (same acts)..... 2,340.00 3 messengers or laborers, at \$720 each (by transfer from lump fund for general expenses) (same acts)..... 2,160.00 1 messenger or laborer (by transfer from lump fund for general expenses) (same acts)..... 700.00

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

*Forest Service—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Forest Service, \$80,200—Continued.</i>	<i>Salaries, Forest Service, \$80,200—Continued.</i>	<i>Salaries, Forest Service, \$2,318,680—Continued.</i>
		6 messengers or laborers, at \$660 each (increase of 2 submitted by transfer from lump fund for general expenses) (same acts)...
		5 messengers or laborers, at \$600 each (by transfer from lump fund for general expenses) (same acts).....
		2 messengers or laborers, at \$540 each (by transfer from lump fund for general expenses) (same acts).....
		3 messengers or messenger boys, at \$480 each (by transfer from lump fund for general expenses) (same acts).....
		3 messengers or messenger boys, at \$420 each (by transfer from lump fund for general expenses) (same acts).....
		16 messengers or messenger boys, at \$360 each (increase of 12 submitted by transfer from lump fund for general expenses) (same acts).....
		1 apprentice boy (by transfer from lump fund for general expenses) (same acts).....
		1 charwoman (by transfer from lump fund for general expenses) (same acts).....
		1 charwoman (by transfer from lump fund for general expenses) (same acts).....
		1 charwoman (by transfer from lump fund for general expenses) (same acts).....
		11 charwomen, at \$240 each (by transfer from lump fund for general expenses) (same acts)...
		Total.....
		NOTE.—There is an increase in the above appropriation of \$2,258,480, which covers the transfer of 1,894 employees from the lump-fund appropriation for general expenses at the same salaries they are now receiving, and the lump-fund appropriation has been reduced accordingly. There are no new places or promotions submitted.
<i>General expenses, Forest Service, \$3,986,000.</i>	<i>General expenses, Forest Service, \$4,672,900.</i>	<i>General expenses, Forest Service, \$3,189,420.</i>
To enable the Secretary of Agriculture to experiment and to make and continue investigations and report on forestry, national forests, forest fires, and lumbering; to advise the owners of woodlands as to the proper care of the same; to investigate and test American timber and timber trees and their uses, and methods for the preservative treatment of timber; to seek, through investigations and the planting of native and foreign species, suitable trees for the treeless regions; to erect necessary buildings; to pay all expenses necessary to protect, administer, and improve the national forests; to ascertain the natural conditions upon and utilize the national forests; to transport and care for fish and game supplied to stock the national forests or the waters therein; to employ agents, clerks, assistants, and other labor required in practical forestry and in the administration of national forests, in the city of Washington and elsewhere; to collate, digest, report, and illustrate the results of experiments and investigations made by the Forest Service; to purchase law books to an amount not exceeding five hundred dollars, necessary supplies, apparatus, and office fixtures, and technical books and technical journals for officers of the Forest Service stationed outside of Washington; to pay freight, express, telephone, and telegraph charges; for electric light and power, fuel, gas, ice, washing towels, and official traveling and other necessary expenses, including traveling expenses for legal and fiscal officers while performing Forest Service work; and for rent in the city of Washington and elsewhere.		

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Forest Service, \$3,986,000—Continued.</i>	<i>General expenses, Forest Service, \$4,672,900—Continued.</i>	<i>General expenses, Forest Service, \$3,189,420—Con.</i>
	This appropriation is made up as follows: For salaries and field and station expenses necessary for the use, maintenance, and protection of the national forests— Items 1 to 150, aggregating..... \$3,871,500 For fighting forest fires and other unforeseen emergencies (item 151)..... 135,000 For purchase and maintenance of field and office supplies, etc. (item 152)..... 221,040 For investigations to promote economy in the use of forests products (item 153). 129,420 For national forest range investigations and experiments (item 154)..... 11,820 For silvicultural investigations on national forests, tree planting, reproduction of forests, and regulation of cutting (item 155)..... 66,640 For investigations and experiments to determine the best methods for the conservative management of forests and forest lands (item 156)..... 108,010 For market and miscellaneous forest investigations, etc. (item 157)..... 115,470 For testing plants and woods to determine if suitable for making paper (item 158)..... 14,000  Total..... 4,672,900  (Not to exceed 10 per cent of the amounts appropriated for general expenses and improvement of the national forests are available under the law in the discretion of the Secretary of Agriculture for general administration.) Allotted approximately as follows: Salaries in Washington..... 225,388.62 Salaries outside of Washington..... 2,978,991.38 Stationery..... 51,859.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 767,927.15 Furniture..... 30,337.00 Fuel..... 2,500.00 Freight..... 26,000.00 Express..... 6,000.00 Telegraph..... 6,500.00 Telephone..... 9,600.00 Rent..... 100,371.47 Gas and electricity..... 1,500.00 Apparatus, instruments, and laboratory material..... 18,461.00 Travel and station and field expenses..... 364,008.00 Forester's contingent, Sept. 30, 1910..... 83,456.38  Total..... 4,672,900.00	This appropriation is made up as follows: For salaries and field and station expenses (including nurseries) necessary for the use, maintenance, and protection of the national forests within the States and Territories in the following districts: District 1..... \$337,560 District 2..... 265,780 District 3..... 264,320 District 4..... 258,260 District 5..... 297,220 District 6..... 369,700 For fighting forest fires, insect infestation, and other unforeseen emergencies.... 135,000 For purchase and maintenance of supplies and equipment..... 198,080 For investigations to promote economy in the use of forest products; wood-distillation experiments; wood-preservation studies; timber tests; tests of woods for use in paper making, etc..... 177,040 For national forest range investigations and experiments..... 18,420 For silvicultural investigations on national forests, tree planting, reproduction of forests, purchase of tree seed, regulation of cutting, etc..... 166,640 For general administration and for general silvicultural, dendrological, and miscellaneous forest investigations..... 211,400 For the construction and maintenance of improvements on the national forests..... 490,000  Total..... 3,189,420  To be expended as follows: Salaries in Washington..... 108,420.00 Salaries outside of Washington..... 1,224,014.00 Stationery..... 88,484.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,108,556.00 Furniture, etc..... 51,571.00 Fuel..... 2,580.00 Freight..... 28,725.00 Express..... 6,000.00 Telegraph..... 7,000.00 Telephone..... 9,800.00 Rent..... 104,574.00 Gas and electricity..... 1,500.00 Apparatus, instruments, and laboratory material..... 49,726.00 Travel and station and field expenses..... 398,470.00  Total..... 3,189,420.00
Expenditures were as follows: Salaries in Washington..... \$245,898.26 Salaries outside of Washington..... 2,550,514.99 Stationery..... 17,455.60 Miscellaneous supplies and services, equipment, books, machinery, etc..... 550,197.51 Furniture..... 29,447.40 Fuel..... 1,563.85 Freight..... 13,115.99 Express..... 3,535.69 Telegraph..... 5,284.20 Telephone..... 9,084.42 Rent..... 99,629.17 Gas and electricity..... 1,430.76 Apparatus, instruments, and laboratory material..... 13,188.87 Printing and binding..... 1,423.55 Travel and station and field expenses..... 333,730.45 Advanced to temporary special disbursing agents for fire fighting and miscellaneous expenses..... 42,115.42  Total..... 3,917,616.13 Less repayments to the credit of the appropriation, including reimbursements on account of cooperative work with other Federal bureaus..... 13,946.30  Net expenditures to Aug. 31, 1910..... 3,903,669.83 Liabilities outstanding on Aug. 31, 1910 (estimated)..... 61,802.85  Total..... 3,965,472.68 Balance to be returned to the Treasury (estimated)..... 20,527.32  Total appropriation..... 3,986,000.00		

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.																																																																																																																						
<p><i>Improvement of the national forests, 1910, \$600,000.</i></p> <p>To be expended as the Secretary of Agriculture may direct, for the construction and maintenance of roads, trails, bridges, fire lanes, telephone lines, cabins, fences, and other permanent improvements necessary for the proper and economical administration, protection, and development of the national forests.</p> <p>Expenditures were as follows:</p> <table><tr><td>Salaries out of Washington.....</td><td>\$52,929.24</td></tr><tr><td>Miscellaneous supplies and services, equipment, books, machinery, etc.....</td><td>487,444.86</td></tr><tr><td>Furniture.....</td><td>1,281.73</td></tr><tr><td>Freight.....</td><td>3,897.05</td></tr><tr><td>Express.....</td><td>55.06</td></tr><tr><td>Telephone.....</td><td>20.50</td></tr><tr><td>Travel and station and field expenses.....</td><td>13,769.90</td></tr><tr><td>Advanced to temporary special disbursing agents for payments to laborers and for miscellaneous expenditures.....</td><td>28,596.58</td></tr><tr><td>Total.....</td><td>587,994.92</td></tr><tr><td>Less repayments.....</td><td>13.80</td></tr><tr><td>Net total expenditures to Aug. 31, 1910..</td><td>587,981.12</td></tr><tr><td>Liabilities outstanding on Aug. 31, 1910 (estimated).....</td><td>10,854.52</td></tr><tr><td>Total.....</td><td>598,835.64</td></tr><tr><td>Balance to be returned to the Treasury (estimated).....</td><td>1,164.36</td></tr><tr><td>Total appropriation.....</td><td>600,000.00</td></tr><tr><td>Total for salaries, general expenses, and improvements.....</td><td>4,646,200.00</td></tr></table> <p><i>Salaries, general expenses, and improvements, \$4,646,200.</i></p> <p>Distribution of expenditures among projects:</p> <p>OFFICE OF THE FORESTER AND ASSOCIATE FORESTER.</p> <p>(Headquarters, Washington, D. C.)</p> <p>General administration:</p> <table><tr><td>Salaries.....</td><td>\$13,608.13</td></tr><tr><td>Travel and other expenses.....</td><td>2,889.80</td></tr><tr><td></td><td>\$16,497.93</td></tr></table> <p>General inspection:</p> <p>The work of inspection on the National Forests is performed in the main by the district foresters and their assistants in the six forest service districts in the West. A limited number of inspectors under the immediate supervision of the forester are assigned to general inspection.</p> <table><tr><td>Salaries.....</td><td>\$5,161.11</td></tr><tr><td>Travel and other expenses.....</td><td>2,667.22</td></tr><tr><td></td><td>7,828.33</td></tr></table> <p>Law:</p> <p>Legal work in connection with matters affecting the Forest Service.</p> <table><tr><td>Salaries.....</td><td>\$20,100.37</td></tr><tr><td>Travel and other expenses.....</td><td>3,651.44</td></tr><tr><td>Purchase of law books.....</td><td>499.34</td></tr><tr><td></td><td>24,251.15</td></tr></table> <p>Information:</p> <p>The planning of the lines along which the Forest Service makes known to the general public the practical results of its work, and the supplying of information for publication.</p> <table><tr><td>Salaries.....</td><td>\$9,024.23</td></tr><tr><td>Travel and other expenses.....</td><td>1,399.34</td></tr><tr><td></td><td>10,423.57</td></tr></table>	Salaries out of Washington.....	\$52,929.24	Miscellaneous supplies and services, equipment, books, machinery, etc.....	487,444.86	Furniture.....	1,281.73	Freight.....	3,897.05	Express.....	55.06	Telephone.....	20.50	Travel and station and field expenses.....	13,769.90	Advanced to temporary special disbursing agents for payments to laborers and for miscellaneous expenditures.....	28,596.58	Total.....	587,994.92	Less repayments.....	13.80	Net total expenditures to Aug. 31, 1910..	587,981.12	Liabilities outstanding on Aug. 31, 1910 (estimated).....	10,854.52	Total.....	598,835.64	Balance to be returned to the Treasury (estimated).....	1,164.36	Total appropriation.....	600,000.00	Total for salaries, general expenses, and improvements.....	4,646,200.00	Salaries.....	\$13,608.13	Travel and other expenses.....	2,889.80		\$16,497.93	Salaries.....	\$5,161.11	Travel and other expenses.....	2,667.22		7,828.33	Salaries.....	\$20,100.37	Travel and other expenses.....	3,651.44	Purchase of law books.....	499.34		24,251.15	Salaries.....	\$9,024.23	Travel and other expenses.....	1,399.34		10,423.57	<p><i>Improvement of the national forests, 1911, \$275,000.</i></p> <p>Allotted approximately as follows:</p> <table><tr><td>Salaries out of Washington.....</td><td>\$26,145.54</td></tr><tr><td>Miscellaneous supplies and services, equipment, books, machinery, etc.....</td><td>238,962.52</td></tr><tr><td>Freight.....</td><td>1,500.00</td></tr><tr><td>Express.....</td><td>100.00</td></tr><tr><td>Telephone.....</td><td>50.00</td></tr><tr><td>Travel and station and field expenses....</td><td>8,241.94</td></tr><tr><td>Total.....</td><td>275,000.00</td></tr></table> <p>Total for salaries, general expenses, and improvements..... 5,008,100.00</p> <p><i>Salaries, general expenses, and improvements, \$5,008,100.</i></p> <p>Distribution of allotments:</p> <p>OFFICE OF THE FORESTER AND ASSOCIATE FORESTER.</p> <p>(Headquarters, Washington, D. C.)</p> <p>General administration:</p> <table><tr><td>Salaries.....</td><td>\$20,632.78</td></tr><tr><td>Travel and other expenses....</td><td>6,850.00</td></tr><tr><td></td><td>\$27,482.78</td></tr><tr><td>Contingent fund (Sept. 30, 1910).....</td><td>83,456.38</td></tr><tr><td>Statutory salary lost to Sept. 30, 1910...</td><td>417.50</td></tr></table> <p>General inspection (included under "General administration").</p> <p>Law:</p> <p>(NOTE.—The law officers of the Forest Service engaged on purely legal work have been transferred to the Office of the Solicitor, Department of Agriculture. Legal work pertaining to forest lands is performed under the direction of the branch of lands. Traveling expenses of the law officers while engaged on Forest Service work are paid from Forest Service funds, and also the salaries of a part of the clerical force of the office.)</p> <table><tr><td>Salaries.....</td><td>\$2,800.00</td></tr><tr><td>Travel and other expenses.....</td><td>2,250.00</td></tr><tr><td>Purchase of law books.....</td><td>500.00</td></tr><tr><td></td><td>5,550.00</td></tr></table> <p>Editor (see "Information" in 1910 column):</p> <table><tr><td>Salaries.....</td><td>\$7,520.00</td></tr><tr><td>Travel and other expenses....</td><td>900.00</td></tr><tr><td></td><td>8,420.00</td></tr></table>	Salaries out of Washington.....	\$26,145.54	Miscellaneous supplies and services, equipment, books, machinery, etc.....	238,962.52	Freight.....	1,500.00	Express.....	100.00	Telephone.....	50.00	Travel and station and field expenses....	8,241.94	Total.....	275,000.00	Salaries.....	\$20,632.78	Travel and other expenses....	6,850.00		\$27,482.78	Contingent fund (Sept. 30, 1910).....	83,456.38	Statutory salary lost to Sept. 30, 1910...	417.50	Salaries.....	\$2,800.00	Travel and other expenses.....	2,250.00	Purchase of law books.....	500.00		5,550.00	Salaries.....	\$7,520.00	Travel and other expenses....	900.00		8,420.00	<p><i>Improvement of the national forests, 1912.</i></p> <p>(Provided for as a subappropriation under "General expenses, forest service.")</p> <p>Total for salaries, general expenses and improvements..... \$5,508,100.00</p> <p><i>Salaries, general expenses, and improvements, \$5,508,100.</i></p> <p>Distribution of estimates:</p> <p>OFFICE OF THE FORESTER AND ASSOCIATE FORESTER.</p> <p>(Headquarters, Washington, D. C.)</p> <p>General administration:</p> <table><tr><td>Salaries.....</td><td>\$22,650.00</td></tr><tr><td>Travel, station, and field expenses.....</td><td>5,600.00</td></tr><tr><td></td><td>\$28,250.00</td></tr><tr><td>Contingent.....</td><td>17,625.00</td></tr></table> <p>General inspection (included under "General administration").</p> <p>Law (see note in 1911 column):</p> <table><tr><td>Salaries.....</td><td>\$2,800.00</td></tr><tr><td>Travel, station, and field expenses... ..</td><td>2,250.00</td></tr><tr><td>Purchase of law books.....</td><td>500.00</td></tr><tr><td></td><td>5,550.00</td></tr></table> <p>Editor (including "Information"):</p> <table><tr><td>Salaries.....</td><td>\$7,520.00</td></tr><tr><td>Press clippings....</td><td>300.00</td></tr><tr><td></td><td>7,820.00</td></tr></table>	Salaries.....	\$22,650.00	Travel, station, and field expenses.....	5,600.00		\$28,250.00	Contingent.....	17,625.00	Salaries.....	\$2,800.00	Travel, station, and field expenses... ..	2,250.00	Purchase of law books.....	500.00		5,550.00	Salaries.....	\$7,520.00	Press clippings....	300.00		7,820.00
Salaries out of Washington.....	\$52,929.24																																																																																																																							
Miscellaneous supplies and services, equipment, books, machinery, etc.....	487,444.86																																																																																																																							
Furniture.....	1,281.73																																																																																																																							
Freight.....	3,897.05																																																																																																																							
Express.....	55.06																																																																																																																							
Telephone.....	20.50																																																																																																																							
Travel and station and field expenses.....	13,769.90																																																																																																																							
Advanced to temporary special disbursing agents for payments to laborers and for miscellaneous expenditures.....	28,596.58																																																																																																																							
Total.....	587,994.92																																																																																																																							
Less repayments.....	13.80																																																																																																																							
Net total expenditures to Aug. 31, 1910..	587,981.12																																																																																																																							
Liabilities outstanding on Aug. 31, 1910 (estimated).....	10,854.52																																																																																																																							
Total.....	598,835.64																																																																																																																							
Balance to be returned to the Treasury (estimated).....	1,164.36																																																																																																																							
Total appropriation.....	600,000.00																																																																																																																							
Total for salaries, general expenses, and improvements.....	4,646,200.00																																																																																																																							
Salaries.....	\$13,608.13																																																																																																																							
Travel and other expenses.....	2,889.80																																																																																																																							
	\$16,497.93																																																																																																																							
Salaries.....	\$5,161.11																																																																																																																							
Travel and other expenses.....	2,667.22																																																																																																																							
	7,828.33																																																																																																																							
Salaries.....	\$20,100.37																																																																																																																							
Travel and other expenses.....	3,651.44																																																																																																																							
Purchase of law books.....	499.34																																																																																																																							
	24,251.15																																																																																																																							
Salaries.....	\$9,024.23																																																																																																																							
Travel and other expenses.....	1,399.34																																																																																																																							
	10,423.57																																																																																																																							
Salaries out of Washington.....	\$26,145.54																																																																																																																							
Miscellaneous supplies and services, equipment, books, machinery, etc.....	238,962.52																																																																																																																							
Freight.....	1,500.00																																																																																																																							
Express.....	100.00																																																																																																																							
Telephone.....	50.00																																																																																																																							
Travel and station and field expenses....	8,241.94																																																																																																																							
Total.....	275,000.00																																																																																																																							
Salaries.....	\$20,632.78																																																																																																																							
Travel and other expenses....	6,850.00																																																																																																																							
	\$27,482.78																																																																																																																							
Contingent fund (Sept. 30, 1910).....	83,456.38																																																																																																																							
Statutory salary lost to Sept. 30, 1910...	417.50																																																																																																																							
Salaries.....	\$2,800.00																																																																																																																							
Travel and other expenses.....	2,250.00																																																																																																																							
Purchase of law books.....	500.00																																																																																																																							
	5,550.00																																																																																																																							
Salaries.....	\$7,520.00																																																																																																																							
Travel and other expenses....	900.00																																																																																																																							
	8,420.00																																																																																																																							
Salaries.....	\$22,650.00																																																																																																																							
Travel, station, and field expenses.....	5,600.00																																																																																																																							
	\$28,250.00																																																																																																																							
Contingent.....	17,625.00																																																																																																																							
Salaries.....	\$2,800.00																																																																																																																							
Travel, station, and field expenses... ..	2,250.00																																																																																																																							
Purchase of law books.....	500.00																																																																																																																							
	5,550.00																																																																																																																							
Salaries.....	\$7,520.00																																																																																																																							
Press clippings....	300.00																																																																																																																							
	7,820.00																																																																																																																							

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
OFFICE OF THE FORESTER AND ASSOCIATE FORESTER—continued.	OFFICE OF THE FORESTER AND ASSOCIATE FORESTER—continued.	OFFICE OF THE FORESTER AND ASSOCIATE FORESTER—continued.
Publication: Preparation of results of studies for publication. Preparation of material for teachers and school textbooks, and the dissemination of forest information through educational circulars and public addresses. The upkeep of a mailing list. Salaries..... \$24,110.58 Travel and other expenses..... 3,013.63 \$27,124.21	Publication: Supervision— Salaries..... \$2,617.50 Travel and other expenses. 700.00 Review— Salaries..... 2,300.00 Education— Salaries..... 7,957.50 Travel and other expenses. 600.00 Printing and mailing— Salaries..... 13,085.00 \$27,260.00	Publication: Supervision— Salaries..... \$2,700.00 Travel, station, and field expenses..... 700.00 Review— Salaries..... 1,700.00 Education— Salaries..... 7,320.00 Printing and mailing— Salaries..... 13,340.00 \$25,760.00
Forest statistics: The collection in cooperation with the Census Bureau of annual statistics of forest products of the United States, and the compilation of statistical data concerning the uses of special forms of wood, exports and imports of forest products, forest fires, etc. Salaries..... \$3,885.00 Travel and other expenses..... 1,010.25 4,895.25	Forest statistics: (NOTE.—No specific allotment under this caption, the work having been divided up and apportioned to certain offices in the branches of silviculture and forest products.) Salaries..... 11,010.00 Travel and other expenses.... 2,040.00 13,050.00	Forest statistics (see note in 1911 column).
Dendrology: Investigations of the distribution of trees and forests, the identification of trees and woods, and miscellaneous dendrological studies: Salaries..... \$6,609.78 Travel and other expenses..... 1,325.00 7,934.78	Dendrology: Salaries..... 11,010.00 Travel and other expenses.... 2,040.00 13,050.00	Dendrology: Salaries..... 12,460.00 Travel, field, and station exps. 1,400.00 13,860.00
Accounts (Washington and Madison offices): The conduct of the disbursements and receipts of the Forest Service, its bookkeeping, cost keeping, by projects, preparation of congressional reports by expenditures, and the preparation of all papers necessary to appointments, promotion, leave, and similar matters affecting the personnel. The accounts offices in the various districts of the Forest Service are under the general supervision of the Washington office: Salaries..... \$19,203.00 Travel expenses..... 2,185.79 21,388.79	Accounts: (NOTE.—In addition to the amounts shown here as paid from Forest Service funds, the salaries of the chief and assistant chief, aggregating \$4,500, are paid from the appropriation for the Office of Accounts and Disbursements, Department of Agriculture.) Salaries..... \$14,200.00 Travel expenses..... 1,500.00 15,700.00	Accounts (see note in 1911 column): Salaries..... \$13,260.00 Travel, field, and station exps. 1,500.00 14,760.00
Total, Forester and Associate Forester... 120,344.01	Total, Forester and Associate Forester. 180,919.16	Total Forester and Associate Forester..... 113,625.00
BRANCH OF OPERATION. (Headquarters, Washington, D. C.)	BRANCH OF OPERATION. (Headquarters, Washington, D. C.)	BRANCH OF OPERATION. (Headquarters, Washington, D. C.)
Supervision of the business of organization and management of the Forest Service and of national forest work. Administration: Salaries..... \$9,850.84 Travel expenses..... 2,642.66 \$12,493.50	Administration: Salaries..... \$10,100.00 Travel expenses..... 1,500.00 \$11,600.00	Administration: Salaries..... \$10,100.00 Travel expenses.. 2,700.00 \$12,800.00
Geography: This office included the sections of drafting atlas, alienation, and photography. Supervision— Salaries..... \$3,460.00 Travel and other expenses... 4,047.55 7,507.55	Geography: Supervision— Salaries..... 4,320.17 Travel and other expenses 500.00 4,820.17	Geography: Supervision— Salaries..... 4,360.00 Travel, station, and field expenses .... 500.00 4,860.00
Drafting— All classes of drafting required by the various offices of the Forest Service and for use in the administration of the National Forests. Salaries..... 17,555.55	Drafting— Salaries..... 17,930.00	Drafting— Salaries..... 16,980.00
Atlas— The graphic record of data obtained by the Forest Service and of business done on the National Forests. Salaries..... \$10,849.99 Travel and other expenses 11,682.02 22,532.01	Atlas— Salaries..... 11,260.00 Engraving maps, etc..... 7,850.00 19,110.00	Atlas— Salaries..... 11,320.00 Engraving maps, etc... 8,000.00 19,320.00
Alienation— The examination of the records of the General Land Office to determine the public, State, or private ownership of lands within the National Forests. Salaries..... 2,490.00	Alienation— (NOTE.—This work has been transferred to lands.)	Alienation. (See note 1911 column.)

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
BRANCH OF OPERATION—continued.	BRANCH OF OPERATION—continued.	BRANCH OF OPERATION—continued.
Geography—Continued.	Geography—Continued.	Geography—Continued.
Photography—	Photography—	Photography—
The conduct of the laboratory work of photography for the Forest Service.		
Salaries..... \$8,442.22	Salaries..... \$8,358.16	Salaries..... \$9,560.00
Supplies and equipment... 5,883.33	Supplies and equipment... 6,000.00	Supplies, etc. 10,000.00
\$14,325.55	\$14,358.16	\$19,560.00
Maintenance:	Maintenance:	Maintenance:
General supervision of office quarters, of general clerical and labor help, and of office supplies and equipment.		
Supervision and purchase—	Supervision and purchase—	Supervision and purchase—
Salaries..... 2,304.17	Salaries..... 1,500.00	Salaries..... 1,600.00
Supplies—	Supplies—	Supplies—
The care and distribution of instruments, equipment, furniture, and office supplies.		
Salaries..... 4,722.17	Salaries..... 5,340.00	Salaries..... 5,520.00
General clerical work: Salaries—	General clerical work: Salaries—	General clerical work: Salaries—
Mail—Receipt and distribution..... \$2,208.32	Mail—Receipt and distribution..... \$2,240.00	Mail—Receipt and distribution and files \$3,340.00
Stenography and typewriting..... 19,897.89	Stenography and typewriting..... 25,534.00	Stenography and typewriting..... 28,340.00
Files—Maintenance of the general files..... 2,200.00	Files..... 1,000.00	
24,306.21	28,774.00	31,680.00
Quarters—	Quarters—	Quarters—
Salaries of messengers, watchmen, etc..... 19,432.00	Salaries of messengers, watchmen, etc..... 19,974.00	Salaries of messengers, watchmen, etc..... 19,840.00
Rent..... 25,249.19	Rent..... 25,075.00	Rent..... 25,075.00
Miscellaneous supplies..... 2,729.50	Miscellaneous supplies..... 3,000.00	Miscellaneous supplies..... 3,000.00
47,410.69	48,049.00	47,915.00
Purchases (Washington office) (see also "Purchases," supply depot, Ogden, Utah)—	Purchases (Washington office) (see also "Purchases," supply depot, Ogden, Utah, for field use)—	Purchases (Washington office) (see also "Purchases," supply depot, Ogden, Utah)—
Furniture and office equipment..... 1,879.54	Furniture and office equipment..... 3,820.00	Furniture and office equipment..... 3,000.00
Stationery and expendable office supplies..... 8,893.95	Stationery and expendable office supplies..... 22,680.00	Stationery and expendable office supplies..... 17,000.00
10,773.49	26,500.00	20,000.00
Miscellaneous—	Miscellaneous—	Miscellaneous—
Telegrams (service)..... 6,000.00	Telegrams (service)..... 7,000.00	Telegrams (service)..... 7,000.00
Telephone (Washington)..... 1,100.00	Telephone (Washington)..... 1,200.00	Telephone (Washington)..... 1,200.00
Freight and express <sup>1</sup> (Washington)..... 9,000.00	Freight and express (Washington)..... 6,000.00	Freight and express (Washington)..... 6,000.00
Advertising..... 500.00		
16,600.00	14,200.00	14,200.00
Supply depot, Ogden, Utah:	Supply depot, Ogden, Utah:	Supply depot, Ogden, Utah:
This is the central field depot for the care and distribution of field and office equipment and supplies required in the Forest Service outside of Washington.		
Supervision and maintenance—	Supervision and maintenance—	Supervision and maintenance—
Salaries..... 13,397.49	Salaries..... 14,620.00	Salaries..... 12,220.00
Travel station, and field expenses..... 2,708.01	Travel, station, and field expenses..... 500.00	Travel, station, and field expenses..... 500.00
Rent..... 1,250.00	Packing supplies..... 1,000.00	Rent (warehouse, etc.)..... 2,550.00
Registration fees..... 300.00	Registration fees..... 500.00	Heat and light..... 540.00
Freight and express..... 7,800.00	Freight, express, and drayage..... 8,500.00	Advertising..... 500.00
Printing..... 1,598.97	Miscellaneous station expenses..... 840.00	Registration fees..... 500.00
27,054.47	25,960.00	Freight, express, and drayage..... 18,800.00
		Packing supplies..... 500.00
		Temporary labor and miscellaneous station expenses..... 1,200.00
		37,310.00

<sup>1</sup> Freight and express on the National Forests are charged against the lines of work on account of which the shipments were made.

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## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200— Continued.	Salaries, general expenses, and improvements, \$5,008,100— Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
BRANCH OF OPERATIONS—continued.	BRANCH OF OPERATIONS—continued.	BRANCH OF OPERATIONS—continued.
Supply depot, Ogden, Utah—Continued. Purchases (see also "Purchases," Washington)— Furniture and office equipment..... \$61,310.55 Stationery and expendable office supplies..... 34,830.13 Camp and field equipment and supplies..... 15,002.19 Field instruments..... 18,253.24 \$129,396.11	Supply depot, Ogden, Utah—Continued. Purchases (see also "Purchases," Washington)— Furniture and office equipment..... \$26,517.00 Stationery and expendable office supplies..... 30,979.00 Camp and field equipment and supplies..... 23,607.00 Field instruments..... 13,461.00 \$94,564.00	Supply depot, Ogden, Utah—Continued. Purchases (see also "Purchases," Washington)— Furniture and office equipment..... \$28,571.00 Stationery and expendable office supplies..... 49,695.00 Camp and field equipment and supplies..... 32,519.00 Field instruments..... 17,205.00 \$127,990.00
Property auditor (office, Ogden, Utah): Salaries..... 5,355.00 Travel, station, and field expenses..... 332.25 5,687.25	Property auditor (office, Ogden, Utah): Salaries..... 5,620.00 Travel, station, and field expenses..... 700.00 6,320.00	Property auditor (office, Ogden, Utah): Salaries..... 5,220.00 Travel, station, and field expenses..... 500.00 5,720.00
Total operation, including Ogden, supply depot, and property auditor..... 345,158.72	Total operation, including Ogden, supply depot, and property auditor..... 319,025.33	Total operation, including Ogden, supply depot, and property auditor..... 365,455.00
BRANCH OF SILVICULTURE. (Headquarters, Washington, D. C.)	BRANCH OF SILVICULTURE. (Headquarters, Washington, D. C.)	BRANCH OF SILVICULTURE. (Headquarters, Washington, D. C.)
Supervision of technical work relating to the management of national and private forests, including the cutting of timber, reforestation—artificial and natural—and experimental work.		
Administration: Salaries..... \$7,110.98 Travel, station, and field expenses..... 2,244.29 \$9,355.27	Administration: Salaries..... \$9,685.00 Travel, station, and field expenses..... 2,575.00 \$12,260.00	Administration: Salaries..... \$11,720.00 Travel, station, and field expenses..... 3,400.00 \$15,120.00
Federal cooperation: Cooperative work with other branches of the Federal Government which have control of forest lands or lands needing reforestation.	Federal cooperation: (No specific allotment for this work in 1911.)	Federal cooperation: (No estimate.)
Eastern work— Salaries..... \$6,027.49 Travel, station, and field expenses..... 1,904.65 District 2— Salaries..... 144.50 Travel, station, and field expenses..... 129.65 District 3— Salaries and expenses: Zuni National Forest..... 270.88 Manzano National Forest..... 75.35 Total..... 8,552.52 Less amount reimbursed by other Federal bureaus..... 4,627.16 3,925.36	Eastern work— Salaries..... \$20,480.00 Travel, station, and field expenses..... 11,105.54 Total..... 31,585.54 Less amounts to be paid from cooperative funds..... 2,055.54 29,530.00	Eastern work— Salaries..... \$18,860.00 Travel, station, and field expenses..... 7,850.00 26,710.00
State and private cooperation: Preparation of planting plans for private owners, and assisting, by correspondence, private persons having forest plantations. Experimental planting in cooperation with State educational institutions. Studies of forest conditions in cooperation with States to determine the best forest policy for each State to follow, and studies for the conservative management of State and private forest lands.	State and private cooperation:	State and private cooperation:
Eastern work— Salaries..... \$16,255.28 Travel, station, and field expenses..... 8,961.25 District 1— Salaries..... 16,474.82 Travel, station, and field expenses..... 21,674.64 District 2—Expenses..... 487.66 District 5—Expenses..... 100.90 Total..... 63,954.55 Less amounts paid from cooperative funds..... 29,463.32 34,491.23		

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200— Continued.	Salaries, general expenses, and improvements, \$5,008,100— Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
BRANCH OF SILVICULTURE—continued.	BRANCH OF SILVICULTURE—continued.	BRANCH OF SILVICULTURE—continued.
Silvics: The investigation of the scientific problems underlying the practical management of forest lands. This office includes in its work field studies, the establishment and maintenance of forest experiment stations, the compilation of forest data, and the building up and care of the Forest Service library in Washington and the branch libraries in the field.	Silvics:	Silvics:
General supervision and investigative work— Salaries..... \$18,255.66 Travel, station, and field expenses..... 4,154.29 \$22,409.95	General supervision and investigative work— Salaries..... \$12,638.67 Travel, station, and field expenses..... 6,610.00 \$19,248.67	General supervision and investigative work— Salaries..... \$14,980.00 Travel, station, and field expenses..... 6,400.00 \$21,380.00
Library— Salaries..... 4,467.66 Books purchased for field libraries..... 2,999.88 7,467.54	Computing— Salaries..... 7,280.67 Travel, station, and field expenses..... 600.00 7,880.67	Computing— Salaries..... 7,340.00 Travel, station, and field expenses..... 600.00 7,940.00
Total paid from regular appropriation on account of silviculture..... 77,649.35	Library— Salaries..... 4,126.83 Books purchased for field libraries..... 2,000.00 6,126.83	Library— Salaries..... 4,320.00 Books purchased for field libraries..... 2,000.00 6,320.00
	Total allotted from regular appropriation to silviculture..... 75,046.17	Total silviculture..... 77,470.00
BRANCH OF GRAZING.	BRANCH OF GRAZING.	BRANCH OF GRAZING.
(Headquarters, Washington, D. C.)	(Headquarters, Washington, D. C.)	(Headquarters, Washington, D. C.)
Supervision over all matters connected with the consumption of the forage resources of the National Forests by live stock.		
Administration: Salaries..... \$7,255.83 Travel and field expenses..... 3,330.91 \$10,586.74	Administration: Salaries..... \$5,980.00 Travel and field expenses..... 2,900.00 \$8,880.00	Administration: Salaries..... \$5,860.00 Travel and field expenses..... 2,900.00 \$8,760.00
Grazing studies: Studies of the National Forest range and of forage plants and investigations of best methods for their use and improvement.	Grazing studies:	Grazing studies:
Salaries..... \$4,385.82 Travel, station, and field expenses. 3,400.00 7,785.82	Salaries..... 7,900.00 Travel, station, and field expenses..... 3,920.00 11,820.00	Salaries..... 12,020.00 Travel, station, and field expenses..... 6,400.00 18,420.00
Total branch of grazing..... 18,372.56	Total branch of grazing..... 20,700.00	Total branch of grazing.... 27,180.00
BRANCH OF LANDS.	BRANCH OF LANDS.	BRANCH OF LANDS.
(Headquarters, Washington, D. C.)	(Headquarters, Washington, D. C.)	(Headquarters, Washington, D. C.)
Supervision of the granting of permits for the occupancy and use of National Forest lands and of investigations of claims to lands within the National Forests having for their object the determination of the natural character of the lands and the assistance of claimants in perfecting their claims.	(This branch now has charge of the legal work pertaining to National Forest lands, which prior to Feb. 1, 1910, was under the Office of Law.)	
Salaries..... \$11,312.02 Travel, station, and field expenses.. 297.95 Geologists' salaries and expenses... 2,733.80 \$14,363.77	Salaries..... \$27,090.00 Travel, station, and field expenses..... 3,650.00 30,740.00	Salaries..... \$32,510.00 Travel, station, and field expenses..... 5,600.00 \$38,110.00
BRANCH OF PRODUCTS.	BRANCH OF PRODUCTS.	BRANCH OF PRODUCTS.
(Headquarters, Madison, Wis.)	(Headquarters, Madison, Wis.)	(Headquarters, Madison, Wis.)
Supervision of experimental and statistical investigations which have as their object the more economic use of the products of the forests.		
Administration: Salaries..... \$5,095.36 Travel, station, and field expenses (including transportation expenses of clerks transferred from other Forest Service headquarters to Madison and Chicago)..... 2,030.08 7,125.44	Administration: Salaries..... \$5,650.00 Travel, station, and field expenses..... 1,600.00 7,250.00 Contingent..... 8,022.50	Administration: Salaries..... \$4,450.00 Travel, station, and field expenses... 1,200.00 \$5,650.00

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
BRANCH OF PRODUCTS—continued.	BRANCH OF PRODUCTS—continued.	BRANCH OF PRODUCTS—continued.
Washington office:	Washington office:	Washington office:
Salaries.....	Salaries..... \$4,200.00	Salaries..... \$4,200.00
Travel, station, and field expenses.....	Travel, station, and field expenses..... 700.00	Travel, station, and field expenses..... 1,100.00
	\$4,900.00	\$5,300.00
Wood utilization (office at Chicago, Ill.):	Wood utilization (office at Chicago, Ill.):	Wood utilization (office at Chicago, Ill.):
Collection of statistics of production, consumption, and prices of forest products and conduct of investigations, not of a scientific or experimental character, to promote economy in the use of forest products.		
Salaries..... \$9,532.22	Salaries..... 11,440.00	Salaries..... 15,000.00
Travel, station, and field expenses..... 3,832.99	Travel, station, and field expenses..... 6,360.00	Travel, station, and field expenses..... 3,420.00
Rent (Chicago office)..... 915.00		
	17,800.00	18,420.00
14,280.21		
Less amounts paid from special appropriations..... 105.47		
\$14,174.74		
Laboratory, forest products (Madison, Wis.):	Laboratory:	Laboratory:
This office controls all scientific and experimental methods employed by the Branch of Products. It comprises the sections of wood preservation, chemistry, wood pulp, wood distillation, technology, timber tests, engineering, and maintenance.		
Supervision—	Supervision—	Supervision—
Salaries..... \$5,828.00	Salaries..... 2,000.00	Salaries..... 13,360.00
Travel, station, and field expenses..... 1,119.93	Travel, station, and field expenses..... 1,100.00	Travel, station, and field expenses..... 1,480.00
Total..... 6,947.93	3,100.00	14,840.00
Less amount paid from cooperative..... 798.33		
6,149.60		
Equipment—	Equipment—	Equipment—
Purchase, installation, and transportation..... 36,877.75	Purchase, installation, and transportation..... 36,900.00	Purchase, installation, and transportation..... 16,500.00
Less amount paid from special appropriations..... 4,831.52	Less amount paid from special appropriations..... 22,000.00	
32,046.23	14,900.00	16,500.00
Chemistry—	Chemistry—	Chemistry—
Chemical studies related to the work of the laboratory.		
Salaries..... \$3,640.97	Salaries..... 4,520.00	Salaries..... 8,700.00
Travel, station, and field expenses..... 18.35	Travel, station, and field expenses..... 300.00	Travel, station, and field expenses..... 600.00
3,659.32	4,820.00	9,300.00
Less amounts paid from special appropriations..... 656.71		
3,002.61		
Wood pulp—	Wood pulp—	Pulp and paper tests—
Experiments to determine the suitability of various woods for pulp making.		
Salaries..... \$4,465.00	Salaries..... 9,800.00	Salaries..... 24,660.00
Travel, station, and field expenses..... 546.50	Travel, station, and field expenses..... 3,000.00	Travel, station, and field expenses..... 3,000.00
5,011.50	12,800.00	27,660.00
All paid from special appropriations..... 5,011.50	To be paid from special appropriations..... 1,000.00	
	11,800.00	
Wood distillation—	Wood distillation—	Wood distillation—
Experiments on the refining and grading of wood turpentine, methods of analysis of and specifications for turpentine, and distillation of resinous wood.		
Salaries..... \$1,516.66	Salaries..... 2,500.00	Salaries..... 7,200.00
Travel, station, and field expenses..... 1,468.33	Travel, station, and field expenses..... 1,000.00	Travel, station, and field expenses..... 2,060.00
2,984.99	3,500.00	9,260.00
720.50		
2,264.49		
Technology—	Technology—	
Investigations relating to the microscopic structure of wood and the principles involved in the change of conditions in wood when it is subjected to different physical conditions.		
Salaries..... \$6,676.66	Timber physics (see Technology in 1910 column).	Timber physics—
Travel, station, and field expenses..... 653.94		Salaries..... \$5,500.00
Total..... 7,330.60		Travel, station, and field expenses..... 600.00
Paid from cooperative funds..... 325.00		6,100.00
7,005.60		
Engineering—	Engineering—	Engineering—
Preparation of plans and specifications for plants or machinery used in the experimental investigations made by the laboratory or by the district offices of products.		
Salaries..... \$1,497.22	Salaries..... \$10,160.00	Salaries..... 12,720.00
Less amount paid from cooperative funds..... 843.60	Travel, station, and field expenses..... 1,900.00	Travel, station, and field expenses..... 1,800.00
653.62	12,060.00	14,520.00

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
BRANCH OF PRODUCTS—continued.	BRANCH OF PRODUCTS—continued.	BRANCH OF PRODUCTS—continued.
Laboratory, forest products (Madison, Wis.)—Continued.	Laboratory—Continued.	Laboratory—Continued.
Wood preservation—	Wood preservation—	Wood preservation—
Studies to ascertain the cheapest and most efficient preservations, processes, and types of plants for the treatment of timbers used by railroads, mining companies, telephone companies, and other consumers of structural timber. Studies to ascertain the most practicable methods for the treatment of fence posts, shingles, and other timbers used on the farm. Also investigations into the underlying principles of wood preservation. The results are then transferred to the field and tested under commercial conditions.		
Salaries..... \$9,186.12	Salaries..... \$8,700.00	Salaries..... \$14,960.00
Travel, station, and field expenses..... 3,703.46	Travel, station, and field expenses..... 2,294.13	Travel, station, and field expenses..... 4,450.00
Total..... 12,889.58	Total..... 10,994.13	
Paid from cooperative funds... 3,824.11	Less amount to be paid from cooperative funds..... 4,894.13	\$19,410.00
\$9,065.47	\$6,100.00	
Timber tests—	Timber tests—	Timber tests—
Tests to determine the strength values of American commercial woods.		
Salaries..... \$5,916.09	Salaries..... 5,400.00	Salaries..... 9,400.00
Travel, station, and field expenses..... 680.68	Travel, station, and field expenses..... 300.00	Travel, station, and field expenses..... 1,160.00
Total..... 6,596.77	Total..... 5,700.00	10,560.00
Paid from cooperative funds... 45.75		
6,551.02		
Maintenance—	Maintenance—	
General supervision over products, quarters at Madison; purchase, care, and distribution of supplies and equipment for the branch of products.		
Salaries..... \$9,331.12	Salaries..... 12,692.50	
Miscellaneous expenses..... 381.48	Miscellaneous expenses..... 500.00	
Rent (Madison)..... 245.00		13,192.50
9,957.60		
Total paid from regular appropriations on account of Chicago and Madison offices of the branch of products (see also products in districts 1, 2, 5, and 6).	Total products, Madison and Chicago; regular appropriation (see also products in districts 1, 2, 5, and 6).	Total products, Madison, Washington, and Chicago (see also products in districts 1, 2, 5 and 6)...
97,996.42	Total Forest Service other than national forest districts..... 748,668.16	157,520.00
Total Forest Service other than national forest districts..... 673,884.83		Total Forest Service other than national forest districts..... 779,360.00
DISTRICT OFFICES.	DISTRICT OFFICES.	DISTRICT OFFICES.
DISTRICT 1.	DISTRICT 1.	DISTRICT 1.
(Headquarters, Missoula, Mont.)		
This district includes Montana, north-eastern Washington, northern Idaho, northwestern South Dakota, northern Michigan, northern Minnesota, and south-western North Dakota.		
OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.
Supervision:	Supervision:	Supervision:
Salaries..... \$5,000.00	Salaries..... \$5,600	Salaries..... \$7,500
Travel, station, and field expenses..... 1,383.35	Travel, station, and field expenses..... 1,600	Travel, field, and station expenses..... 2,600
Travel and expenses of forest assistants..... 510.70	Contingent fund.....	\$10,100.00
\$6,894.05	\$7,200.00	
	405.00	
Law (see "Law" under "Office of the forester and associate forester):	Law:	Law:
	Salaries..... 4,800	*Salaries..... 1,000
	Travel, station, and field expenses..... 1,440	Travel, field, and station expenses..... 2,000
	Total..... 6,240	3,000.00
	Less amount paid from other departmental appropriations..... 3,800	
	2,440.00	
Salaries..... 4,999.99	Accounts:	
Travel, station, and field expenses..... 1,276.99	Salaries..... 11,920	
6,276.96	Travel, station, and field expenses..... 1,600	
	Total..... 13,520	
Accounts (see "Accounts," Washington):	Less amount paid from other departmental appropriations..... 2,000	
Salaries..... 7,776.11		11,520.00
Travel, station, and field expenses..... 885.11		
8,661.22		

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## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 1—Continued.	DISTRICT 1—Continued.	DISTRICT 1—Continued.
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
The handling of agricultural settlement within the national forests. Examination is made of lands applied for under the act of June 11, 1906, by specially trained men, with a view to the opening to settlement and entry of tracts more valuable for agricultural than national forest purposes.		
The investigation of claims to lands within the national forests, to determine the natural character of the lands and to assist claimants in perfecting their claims.		
The examination of the records of the General Land Office to determine the public, State, or private ownership of lands within national forests.		
The supervision of the granting of permits for the occupancy and use of lands in the national forests.		
Salaries..... \$1,784.85	Salaries..... \$10,425	Salaries..... \$14,600
Travel, station, and field expenses... 283.35	Travel, station, and field expenses... 2,400	Travel, field, and station expenses..... 5,300
\$2,068.20	\$12,825.00	\$19,900.00
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
This office has direct oversight of the personnel of the executive force on the national forests of the equipment, expenditures, and general forest administration. It forms the central agency through which administrative matters from all parts of the service are brought together and harmonized.		
Supervision:	Supervision:	Supervision:
Salaries..... \$7,379.15	Salaries..... \$2,900	Salaries..... \$2,900
Travel, station, and field expenses..... 1,732.81	Travel, station, and field expenses..... 800	Travel, field, and station expenses..... 800
9,111.96	3,700.00	3,700.00
(See also expenditures on national forests below.)		
Drafting:	Drafting:	Drafting:
Salaries..... 6,200	Salaries..... 6,200	Salaries..... 6,300
Expenses..... 100	Expenses..... 100	Travel, field, and station expenses..... 200
6,300.00	6,300.00	6,500.00
(See also allotments to national forests below.)		
Engineering:	Engineering:	Engineering (included under "Office of district forester").
This office gives expert advice and assistance on the ground in the construction of roads, trails, telephone lines, and other permanent improvements upon national forests.	Salaries..... \$1,900	
Salaries of engineers..... \$4,909.72	Travel, station, and field expenses..... 800	
Travel, station, and field expenses..... 1,558.54	Improvement contingent..... 410.00	
Salaries of draftsmen..... 6,673.78		
13,142.04		
Maintenance:	Maintenance:	Maintenance:
Salaries..... 7,391.50	Salaries..... \$7,300	Salaries..... \$7,300
Rent..... 5,764.50	Miscellaneous expenses..... 200	Travel, field, and station expenses... 200
Supplies..... 1,245.83	Rent..... 6,700	Rent..... 4,995
Advertising..... 1,200.00	Supplies..... 1,200	Telephone..... 475
Telephone..... 602.41	Telephone..... 200	Miscellaneous supplies..... 800
16,204.24	15,600.00	Freight and express..... 200
		13,970.00
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
This office supervises and assists local forest officers in disposing of national forest timber, both under sale and free use. It also prepares plans for tree planting and tree-seed sowing on the national forests and renders assistance to local forest officers in carrying them out.		
Supervision:	Supervision:	Supervision:
Salaries..... \$5,102.49	Salaries..... \$6,780.00	Salaries..... \$10,680
Travel, station, and field expenses..... 1,188.59	Travel, station, and field expenses..... 2,400.00	Travel, field, and station expenses..... 4,200
6,291.08	9,180.00	14,880.00
Timber sales:	Timber sales:	
Salaries..... 495.00	Salaries..... 690.43	
Expenses..... 292.70	Travel, station, and field expenses..... 50.00	
787.70	Total..... 740.43	
	Less amount paid from cooperative fund..... 490.43	
	250.00	

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Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912				
Salaries, general expenses, and improvements, \$4,646,200—Continued.					Salaries, general expenses, and improvements, \$5,008,100—Continued.					Salaries, general expenses, and improvements, \$5,508,100—Continued.				
DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.				
DISTRICT 1—Continued.					DISTRICT 1—Continued.					DISTRICT 1—Continued.				
OFFICE OF SILVICULTURE—continued.					OFFICE OF SILVICULTURE—continued.					OFFICE OF SILVICULTURE—continued.				
Planting:					Planting:					Planting:				
Salaries.....	\$1,230.00				Salaries.....	\$1,500.00								
Expenses.....	477.10				Travel, field, and station expenses.....	3,760.00			\$5,260.00					
				\$1,707.10										
Experimental work, Dakota National Forest.....					Experimental work, Dakota National Forest.....					Experimental work, Dakota National Forest.....				
									1,760.00					
Silvics:					Silvics:					Silvics:				
Salaries.....					Salaries.....	1,200.00								
Travel, station, and field expenses.....					Travel, station, and field expenses.....	1,000.00			2,200.00					
Experimental work, Dakota National Forest.....					Experimental work, Dakota National Forest.....					Experimental work, Dakota National Forest.....				
						940.00								
Experimental work, Sioux National Forest.....					Experimental work, Sioux National Forest.....					Experimental work, Sioux National Forest.....				
						1,000.00			1,940.00					
OFFICE OF GRAZING.					OFFICE OF GRAZING.					OFFICE OF GRAZING.				
This office has supervision and control, under the general direction of the Washington office, of the grazing business on the national forests, including the necessary audit and record of grazing permits issued.					This office has supervision and control, under the general direction of the Washington office, of the grazing business on the national forests, including the necessary audit and record of grazing permits issued.					This office has supervision and control, under the general direction of the Washington office, of the grazing business on the national forests, including the necessary audit and record of grazing permits issued.				
Salaries.....	\$4,550.00				Salaries.....	\$4,700.00				Salaries.....	\$3,100			
Travel, station, and field expenses.....	1,236.75			5,786.75	Travel, field, and station expenses.....	1,600.00		6,300.00		Travel, field, and station expenses.....	800		\$3,900.00	
OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.				
This office endeavors to ascertain the most profitable methods for utilizing the timber, both dead and green, on the national forests, so far as such methods relate to wood preservation, making experiments to determine the classes of timber which should be treated and how to treat them most profitably.					This office endeavors to ascertain the most profitable methods for utilizing the timber, both dead and green, on the national forests, so far as such methods relate to wood preservation, making experiments to determine the classes of timber which should be treated and how to treat them most profitably.					This office endeavors to ascertain the most profitable methods for utilizing the timber, both dead and green, on the national forests, so far as such methods relate to wood preservation, making experiments to determine the classes of timber which should be treated and how to treat them most profitably.				
Salaries.....	\$766.67				Salaries.....	\$1,200.00				Salaries.....	\$3,200			
Travel, station, and field expenses.....	1,434.31			2,200.98	Travel, field, and station expenses.....	800.00		2,000.00		Travel, field, and station expenses.....	1,000		4,200.00	
SUMMARY.					SUMMARY.					SUMMARY.				
Forests:					Forests:					Forests:				
Salaries.....	\$422,067.53				Salaries.....	\$529,432			675,546.00	Salaries.....	\$584,505.00			
Expenses.....	110,204.60				Expenses.....	104,224.00			725,546.00	Expenses.....	64,425.00			
Improvements.....	96,600.60				Improvements.....				91,990.00	Improvements.....	33,750.00			
Fire.....	21,779.00				Fire.....					Fire.....	102,000.00			
Total.....	650,651.73				Total.....				817,536.00	Total.....	30,000.00			
Offices and sections.....	79,132.28				Offices and sections.....					Offices and sections.....				
Total, district 1.....	729,784.01				Total, district 1.....					Total, district 1.....				

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## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 2.	DISTRICT 2.	DISTRICT 2.
(Headquarters, Denver, Colo.)	(Headquarters, Denver, Colo.)	(Headquarters, Denver, Colo.)
This district includes Colorado, Wyoming, South Dakota, Nebraska, and western Kansas.		
OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.
Supervision:	Supervision:	Supervision:
Salaries..... \$5,374.17	Salaries..... \$5,600.00	Salaries..... \$8,100.00
Travel, station, and field expenses..... 1,911.06	Travel, station, and field expenses..... 2,000.00	Travel, station, and field expenses..... 2,650.00
\$7,285.23	\$7,600.00	\$10,750.00
Law (see "Law," under office of the Forester and Associate Forester):	Law:	Law:
Salaries..... \$3,077.21	Salaries..... 4,700.00	Salaries..... 960.00
Travel, station, and field expenses..... 1,042.24	Travel, station, and field expenses..... 1,000.00	Travel, station, and field expenses..... 2,500.00
4,119.45	5,700.00	3,460.00
	Less amount paid from other departmental appropriations..... 3,800.00	NOTE.—Salary of two assistants to solicitor paid on statutory roll of Department of Agriculture.
	1,900.00	Accounts:
Accounts (see "Accounts," Washington:	Accounts:	Accounts:
Salaries..... \$7,496.39	Salaries..... \$10,220.00	Salaries..... \$8,220.00
Travel, station, and field expenses..... 1,079.25	Travel, station, and field expenses..... 1,000.00	Travel, station, and field expenses..... 1,000.00
8,575.64	11,220.00	9,220.00
	Less amount paid from other departmental appropriations..... 2,000.00	NOTE.—Salary of district fiscal agent paid on statutory roll of Department of Agriculture.
	9,220.00	OFFICE OF LANDS.
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
(See "Lands," District 1.)		
Salaries..... \$2,514.17	Salaries..... \$6,220.00	Salaries..... \$12,600.00
	Travel, station, and field expenses..... 2,200.00	Travel, station, and field expenses..... 4,750.00
	\$8,420.00	\$17,350.00
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
(See "Operation," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$4,330.00	Salaries..... \$2,860.00	Salaries..... \$2,900.00
Travel, station, and field expenses..... 4,346.21	Travel, station, and field expenses..... 850.00	Travel, station, and field expenses..... 850.00
\$8,676.21	\$3,710.00	\$3,750.00
See also expenditures on National Forests below.	See also allotments to National Forests below.	See also estimates for National Forests below.
Engineering (see "Engineering," District 1):	Engineering:	Engineering:
Salaries of engineers..... \$1,641.66	Salaries of engineers..... 1,600.00	Salaries of engineers..... 1,600.00
Travel, station, and field expenses..... 1,238.24	Travel, station, and field expenses..... 1,200.00	Travel, station, and field expenses..... 750.00
Salaries of draftsmen..... 3,325.00	Salaries of draftsmen..... 3,200.00	Salaries of draftsmen..... 3,300.00
6,204.90	6,000.00	\$5,650.00
Maintenance:	Maintenance:	Maintenance:
Salaries and expenses..... 10,259.95	Salaries and expenses..... 9,055.84	Salaries and expenses..... 9,320.00
Rent..... 5,712.09	Rent..... 6,000.00	Rent..... 6,000.00
Supplies..... 1,521.33	Supplies..... 1,000.00	Supplies..... 1,000.00
Advertising..... 981.99	Telephone..... 500.00	Telephone..... 600.00
Telephone..... 1,107.18	Freight..... 200.00	
19,582.54	16,755.84	16,920.00
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
(See "Silviculture," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$4,386.25	Salaries..... \$2,600.00	Salaries..... \$9,460.00
Travel, station, and field expenses..... 834.80	Travel, station, and field expenses..... 800.00	Travel, station, and field expenses..... 3,050.00
\$5,221.05	\$3,400.00	\$12,510.00
Timber sales:	Timber sales:	Timber sales:
Salaries..... 900.00	Salaries..... 1,000.00	
Planting:	Planting:	Planting:
Salaries..... 3,005.00	Salaries..... 2,760.00	Cooperation Colorado State..... 200.00
Travel, station, and field expenses..... 7,874.08	Travel, station, and field expenses..... 1,050.00	Cooperation Bellefourche..... 200.00
10,879.08	3,810.00	400.00

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912.				
Salaries, general expenses, and improvements, \$4,646,200—Continued.					Salaries, general expenses, and improvements, \$5,008,100—Continued.					Salaries, general expenses, and improvements, \$5,603,100—Continued.				
DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.				
DISTRICT 2—Continued.					DISTRICT 2—Continued.					DISTRICT 2—Continued.				
OFFICE OF SILVICULTURE—continued.					OFFICE OF SILVICULTURE—continued.					OFFICE OF SILVICULTURE—Continued.				
Silvics:					Silvics:									
This section makes a study of the distribution, rate of growth, volume and yield and habits of the principal forest trees in the United States, the relation of forests to streamflow and climate, and the conditions necessary to secure natural reforestation of denuded lands in order to furnish information to private timberland owners on request and to forest officers.														
Salaries.....			\$3,604.12		Salaries.....		\$1,400.00			Salaries.....				
Travel, station, and field expenses.....			1,825.23		Travel, station, and field expenses.....		1,000.00			Travel, station, and field expenses.....				
			\$5,429.35				\$2,400.00							
Fremont Experiment Station.....			5,189.95		Fremont Experiment Station.....		3,125.00			Fremont Experiment Station...			\$3,200.00	
Streamflow experiments.....			2,359.56		Streamflow experiments.....		3,237.00			Wagon Wheel Gap Experiment Station.....			2,300.00	
OFFICE OF GRAZING.					OFFICE OF GRAZING.					OFFICE OF GRAZING.				
(See "Grazing," District 1.)														
Salaries.....			\$4,579.00		Salaries.....		\$3,254.16			Salaries.....			\$3,000.00	
Travel, station, and field expenses.....			1,873.85		Travel, station, and field expenses.....		2,000.00			Travel, station, and field expenses.....			1,000.00	
			6,452.85				5,254.16						4,000.00	
OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.				
(See "Products," District 1.)														
Supervision:					Supervision:					Supervision (including Boulder Laboratory):				
Salaries.....			\$3,615.82		Salaries.....		\$7,400.00			Salaries.....			\$8,200.00	
Travel, station, and field expenses.....			935.84		Travel, station, and field expenses.....		3,000.00			Travel, station, and field expenses...			3,400.00	
			4,551.66				10,400.00			Equipment.....			750.00	
Laboratory, Boulder:													12,350.00	
Salaries.....			3,261.38											
Travel, station, and field expenses.....			1,143.85											
			4,405.23											
Rabbit Ear Experiment Station.....			2,240.00											
Forests.	Salaries.	Ex-penses.	Im-prove-ment.	Fire.	Forests.	Salaries.	Ex-penses.	Im-prove-ment.	Total.	Forests.	Salaries.	Ex-penses.	Plant-ing.	Im-prove-ment.
Arapaho, Colo.....	\$11,623.99	\$3,863.90	\$2,245.70	\$189.40	Arapaho.....	\$14,510.00	\$5,930.00	\$1,935.00	\$22,375.00	Arapaho.....	\$16,650	\$3,890	\$1,500	\$2,626
Battlement, Colo.....	9,834.11	2,130.66	1,664.04		Battlement.....	12,350.00	2,840.00	1,955.00	17,145.00	Battlement.....	13,950	2,650		2,334
Bighorn, Wyo.....	18,439.53	3,613.03	5,045.80	115.37	Bighorn.....	24,177.50	4,770.83	2,610.00	31,558.33	Bighorn.....	23,400	6,550		3,749
Black Hills, S. Dak..	27,051.96	10,355.36	3,169.51	4,958.74	Black Hills.....	36,966.00	10,634.00	2,820.00	50,420.00	Black Hills (N. and S.).	32,400	6,751	8,350	3,977
Bonneville, Wyo.....	14,756.92	2,892.60	4,501.89	82.55	Bonneville.....	18,925.00	2,816.50	2,410.00	24,151.50	Bonneville.....	20,750	3,649		5,018
Cheyenne, Wyo.....	16,158.36	7,175.03	3,496.98	1,007.09	Medicine Bow (formerly Cheyenne).	19,068.00	4,965.33	1,305.00	25,338.33	Medicine Bow (formerly Cheyenne).	18,050	6,335		2,454
Cochetopa, Colo.....	10,945.56	5,974.96	2,109.18		Cochetopa.....	13,651.50	2,700.83	1,237.10	17,589.43	Cochetopa.....	15,400	2,425		3,027
Gunnison, Colo.....	12,731.71	3,879.69	1,477.74	1.50	Gunnison.....	15,000.00	3,401.00	1,225.00	19,626.00	Gunnison.....	15,500	3,221		3,033
Hayden, Wyo.....	10,149.07	2,665.33	1,313.66		Hayden.....	11,830.00	2,328.33	1,365.00	15,523.33	Hayden.....	13,050	2,685		1,703
Holy Cross, Colo.....	10,463.62	3,260.01	1,577.39	6.50	Holy Cross.....	13,785.00	2,805.00	1,230.00	17,820.00	Holy Cross.....	15,850	3,385		1,834
Kansas, Kans.....	2,925.49	3,350.51	283.14		Kansas.....	3,400.00	4,203.00		7,603.00	Kansas.....	2,500	980	4,500	240
Las Animas, Colo....	3,240.55	961.58	790.84		Las Animas (combined with San Isabel).					Las Animas (combined with San Isabel).				
Leadville, Colo.....	17,074.09	5,550.50	3,099.64	548.17	Leadville.....	18,461.00	3,369.00	755.00	22,585.00	Leadville.....	22,300	4,235		3,470
Medicine Bow, Colo..	12,850.54	2,368.33	1,748.21	54.70	Colorado (formerly Medicine Bow).	15,816.00	4,227.33	804.00	20,847.33	Colorado (formerly Medicine Bow).	16,100	3,146	1,000	2,254
Montezuma, Colo....	13,185.18	3,494.78	2,983.07		Montezuma.....	14,979.00	4,727.67	2,525.00	22,231.67	Montezuma.....	17,950	2,890		2,478
Nebraska, Nebr.....	7,067.51	6,875.45	1,215.83	52.20	Nebraska.....	8,516.00	7,874.00	124.00	16,514.00	Nebraska.....	5,300	1,025	6,000	720
Pike, Colo.....	22,690.85	14,063.27	3,598.19	192.25	Pike.....	27,381.00	9,654.00	1,700.00	38,735.00	Pike.....	24,750	6,125	5,000	4,734
Rio Grande, Colo....	18,100.28	3,929.79	3,222.08	13.00	Rio Grande.....	18,435.00	4,943.33	2,425.00	25,803.33	Rio Grande.....	22,010	4,020		3,650
Routt, Colo.....	13,253.60	5,812.75	2,875.35	42.27	Routt.....	15,210.00	6,682.50	1,967.00	23,859.50	Routt.....	15,575	3,350		3,155
San Isabel, Colo.....	8,350.31	1,377.63	1,778.48	69.75	San Isabel.....	14,190.00	3,044.89	1,275.00	18,509.89	San Isabel.....	14,420	2,310	500	1,935
San Juan, Colo.....	16,210.22	6,804.85	4,290.00	64.37	San Juan.....	20,470.00	8,380.55	2,705.00	31,555.55	San Juan.....	26,000	6,125		4,807
Shoshone, Wyo.....	11,223.89	2,707.17	5,788.56		Shoshone.....	16,488.00	2,540.33	2,500.00	21,528.33	Shoshone.....	14,900	3,105		3,150
Sopris, Colo.....	11,804.08	2,475.73	1,701.33	10.50	Sopris.....	14,689.00	2,411.82	1,240.00	18,340.82	Sopris.....	17,500	3,323		2,228
Sundance, Wyo.....	3,820.84	1,293.91	922.83	77.35	Sundance.....	4,300.00	1,415.00	875.00	6,590.00	Sundance.....	5,150	1,640		847
Uncompahgre, Colo..	14,595.14	4,833.93	2,778.52		Uncompahgre.....	15,190.00	4,311.67	2,315.00	21,816.67	Uncompahgre.....	18,550	3,685		2,904
White River, Colo....	14,709.07	4,072.25	3,018.04		White River.....	16,310.00	3,625.00	2,460.00	22,395.00	White River.....	18,700	3,285		3,123
Total.....	333,256.49	115,783.00	66,696.00	7,915.71	Total.....	404,098.00	114,601.91	41,762.10	560,462.01	Total.....	426,705	90,785	26,850	69,450
SUMMARY.										SUMMARY.				
Forests:					Fire.....				10,000.00	Salaries.....			\$426,705.00	
Salaries.....			\$333,256.49		Contingent fund.....				6,675.99	Expenses.....			90,785.00	
Expenses.....			115,783.00		Total, national forests.....				577,138.00	Planting.....			26,850.00	
Improvement.....			66,696.00		Offices and sections.....				86,232.00	Improvement.....			69,450.00	
Fire.....			7,915.71		Total District 2.....				663,370.00	Fire.....			20,000.00	
Total.....			523,651.20							Total.....			633,790.00	
Offices and sections.....			104,586.87							Offices and sections.....			101,860.00	
Total District 2.....			628,238.07							Total District 2.....			735,650.00	

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 3.	DISTRICT 3.	DISTRICT 3.
(Headquarters Albuquerque, N. Mex.)	(Headquarters Albuquerque, N. Mex.)	(Headquarters Albuquerque, N. Mex.)
This district includes Arizona, Arkansas, Florida, New Mexico, and Oklahoma.		
OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.
Supervision:	Supervision:	Supervision:
Salaries..... \$5,690.00	Salaries..... \$4,810.00	Salaries..... \$4,700.00
Travel, station, and field expenses..... 1,957.54	Travel, station, and field expenses..... 1,800.00	Travel, station, and field expenses..... 1,800.00
\$7,647.54	\$6,610.00	\$6,500.00
	1,860.54	
Law (see "Law," under Office of the Forester and Associate Forester):	Contingent fund.....	Law:
Salaries..... \$5,069.50	Salaries..... 5,845.00	Salaries..... 1,200.00
Travel, station, and field expenses..... 1,092.37	Travel, station, and field expenses..... 1,200.00	Travel, station, and field expenses..... 1,700.00
6,161.87	7,045.00	2,900.00
	Less amount paid from other departmental appropriations 3,800.00	(NOTE.—Salaries of two assistants to Solicitor paid on Statutory Roll of Department of Agriculture.)
	3,245.00	Accounts:
Accounts (see "Accounts," Washington):	Accounts:	Salaries..... 8,700.00
Salaries..... \$7,976.17	Salaries..... 10,670.00	Travel, station, and field expenses..... 600.00
Travel, station, and field expenses..... 1,032.94	Travel, station, and field expenses..... 1,000.00	9,300.00
9,009.11	11,670.00	(NOTE.—Salaries of district fiscal agent paid on statutory roll of Department of Agriculture.)
	Less amount paid from other departmental appropriations 2,000.00	
	9,670.00	
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
(See Lands District 1.)		
Salaries..... \$6,145.16	Salaries..... \$9,053.25	Salaries..... \$14,520.00
Travel, station, and field expenses..... 96.82	Travel, station, and field expenses..... 1,000.00	Travel, station, and field expenses..... 3,300.00
6,241.98	10,053.25	17,820.00
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
(See "Operation," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$4,674.99	Salaries..... \$4,900.00	Salaries..... \$3,100.00
Travel, station, and field expenses..... 1,793.54	Travel, station, and field expenses..... 1,200.00	Travel, station, and field expenses..... 12,620.00
6,468.53	6,100.00	15,720.00
NOTE.—See also expenditure on National Forests below.	NOTE.—See also expenditure on National Forests below.	NOTE.—See also expenditure on National Forests below.
Establishment and conduct of ranger camp school..... 4,620.36	Engineering:	Engineering (included in Operation—Supervision.)
Engineering (See Engineering District 1):	Salaries.....	
Salaries of engineers..... \$1,545.84	5,110.00	
Travel, station, and field expenses..... 916.75		
Salaries of draftsmen..... 4,176.76	Maintenance:	Maintenance:
6,639.35	Salaries..... \$5,146.16	Salaries..... \$5,080.00
Maintenance:	Expenses..... 85.00	Rent..... 4,125.00
Salaries..... 7,482.05	Rent..... 4,461.30	Supplies and freight..... 1,000.00
Rent..... 5,025.32	Supplies and freight..... 1,000.00	Telephone..... 230.00
Supplies..... 1,177.19	Telephone..... 200.00	10,435.00
Advertising..... 505.58		
Telephone..... 225.62		
14,415.76	10,892.46	
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
(See Silviculture District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$6,165.25	Salaries..... \$7,165.20	Salaries..... \$14,000.00
Travel, station, and field expenses..... 2,838.40	Travel, station, and field expenses..... 1,609.80	Travel, station, and field expenses..... 5,800.00
9,003.65	8,775.00	19,800.00
Planting:	Cooperation..... 875.00	
Salaries..... 904.16	Reconnaissance..... 3,000.00	
Expenses..... 1,690.23	Woodland type studies:	
2,594.39	Salaries..... 1,173.00	
Coconino Experiment Station:	Travel, station, and field expenses..... 1,102.00	
Expenses.....	2,275.00	
8,003.71		

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912.				
Salaries, general expenses, and improvements, \$4,646,200—Continued.					Salaries, general expenses, and improvements, \$5,098,100—Continued.					Salaries, general expenses, and improvements, \$5,508,100—Continued.				
DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.				
DISTRICT 3—Continued.					DISTRICT 3—Continued.					DISTRICT 3—Continued.				
OFFICE OF GRAZING.					OFFICE OF GRAZING.					OFFICE OF GRAZING.				
(See Grazing District 1.)														
Salaries.....	\$4,883.50				Salaries.....	\$4,823.75				Salaries.....	\$4,860.00			
Travel, station, and field expenses..	1,684.70				Travel, station, and field expenses..	1,580.00				Travel, station, and field expenses.....	1,600.00			
	\$6,568.20					\$6,403.75					\$6,460.00			
Forests.	Salaries.	Ex-penses.	Im-prove-ment.	Fire.	Forests.	Salaries.	Exp-enses.	Im-prove-ment.	Total.	Forests.	Sala-ries.	Ex-penses.	Plant-ing.	Im-prove-ment.
Alamo, N. Mex.....	\$17,154.49	\$3,276.75	\$4,737.00	\$449.65	Alamo.....	\$15,363.22	\$5,071.78	\$2,000	\$22,435.00	Alamo.....	\$20,410	\$2,975	\$900	\$2,860
Apache, Ariz.....	19,562.49	4,893.75	5,933.00	441.07	Apache.....	25,013.00	3,306.00	3,200	31,519.00	Apache.....	21,750	6,050	400	4,900
Arkansas, Ark.....	16,375.88	5,518.31	4,864.38	1,553.81	Arkansas.....	19,019.50	9,142.02	100	28,261.52	Arkansas.....	20,300	6,250	900	2,940
Carson, N. Mex.....	14,989.23	3,837.97	3,605.76	10.00	Carson.....	17,000.00	5,830.00	1,359	24,189.00	Carson.....	17,875	8,450	500	2,460
Chiricahua, Ariz.....	8,463.67	3,153.15	2,747.50	293.15	Chiricahua.....	8,950.00	4,983.00	1,400	15,333.00	Chiricahua.....	11,185	2,150	500	2,130
Choctawhatchee, Fla. (see Ocala).					Choctawhatchee..	7,800.00	1,000.00	2,000	10,800.00	Choctawhatchee (see Ocala).				
Coconino, Ariz.....	39,066.61	10,124.74	11,312.56	1,572.87	Coconino.....	34,620.00	8,606.00	3,050	46,276.00	Coconino.....	30,577	11,610	1,400	4,670
Coronado, Ariz.....	11,251.69	3,085.68	2,864.00	2,802.44	Coronado.....	11,100.00	2,216.00	1,800	15,116.00	Coronado (see Garces).				
Crook, Ariz.....	13,750.01	3,259.15	2,440.00	414.21	Crook.....	16,970.00	2,362.00	1,800	21,132.00	Crook.....	15,034	2,740	400	2,450
Datil, N. Mex.....	25,705.32	4,880.09	8,297.32	597.44	Datil.....	29,680.00	6,368.34	3,100	39,148.34	Datil.....	27,710	5,295		4,490
Garces, Ariz.....	9,033.89	1,875.66	2,090.00		Garces.....	8,600.00	2,534.00	1,800	12,934.00	Garces.....	22,100	4,290	500	3,840
Gila, N. Mex.....	25,332.05	9,396.26	5,496.00	423.71	Gila.....	31,871.00	14,226.09	2,500	48,597.09	Gila.....	26,120	8,405	2,500	4,400
Jemez, N. Mex.....	12,508.34	3,751.32	2,884.37	32.20	Jemez.....	15,091.00	4,244.00	1,800	21,135.00	Jemez.....	15,800	10,400		2,940
Lincoln, N. Mex.....	10,568.20	1,121.07	2,139.00	291.18	Lincoln.....	10,376.00	3,134.00	1,200	14,810.00	Lincoln.....	13,650	5,050	500	2,460
Manzano, N. Mex.....	8,053.56	1,649.48	1,982.42		Manzano.....	7,852.00	3,283.00	1,000	12,135.00	Manzano (see Zuni).				
Ocala, Fla. (includes Choctawhatchee)..	6,435.74	4,728.59	1,541.41	58.54	Ocala.....	3,200.00	2,623.00		5,823.00	Ocala (includes Choctawhatchee)	11,440	3,150	600	4,080
Ozark, Ark.....	13,006.39	3,338.11	4,359.33	2,046.83	Ozark.....	19,228.50	7,844.84	1,700	28,773.34	Ozark.....	16,400	7,040		2,940
Pecos, N. Mex.....	13,180.90	6,733.28	2,611.25	43.20	Pecos.....	20,554.00	6,631.00	1,800	28,985.00	Pecos.....	13,400	5,850	2,500	3,270
Prescott, Ariz.....	19,097.22	7,248.89	483.20	50.88	Prescott.....	17,794.00	4,576.13	1,800	24,170.13	Prescott.....	19,250	3,840		2,460
Sitgreaves, Ariz.....	13,103.77	3,451.93	4,632.69	578.82	Sitgreaves.....	16,840.00	3,530.00	2,500	22,870.00	Sitgreaves.....	18,450	6,450		4,490
Tonto, Ariz.....	16,402.28	4,361.35	6,123.26	46.50	Tonto.....	12,427.00	6,373.00	2,300	21,100.00	Tonto.....	13,675	3,200	1,000	3,020
Tusayan, Ariz.....					Tusayan.....	20,260.00	6,590.00	2,250	29,100.00	Tusayan.....	22,250	3,950		3,740
Wichita, Okla.....	4,766.25	1,195.08	902.66	4.75	Wichita.....	4,600.00	1,100.00	500	6,200.00	Wichita.....	4,600	7,850	400	2,040
Zuni, N. Mex.....	10,341.27	3,222.96	2,515.14	13.75	Zuni.....	9,372.50	1,345.58	1,400	12,118.08	Zuni.....	17,020	5,864		2,870
Total.....	328,149.25	94,103.55	88,910.25	11,725.09	Total.....	383,581.72	116,919.78	42,359	542,860.50	Total.....	378,996	120,869	13,000	69,450
SUMMARY.					SUMMARY.					SUMMARY.				
Forests:					Forests:					Forests:				
Salaries.....	\$328,149.25				Salaries.....	\$378,996.00				Salaries.....	\$378,996.00			
Expenses.....	94,103.55				Expenses.....	120,869.00				Expenses.....	120,869.00			
Improvement.....	88,910.25				Improvement.....	69,450.00				Improvement.....	69,450.00			
Fire.....	11,725.09				Fire.....	10,000.00				Fire.....	10,000.00			
Total.....	522,888.05				Total.....	592,315.00				Total.....	592,315.00			
Offices and sections.....	87,374.45				Offices and sections.....	88,935.00				Offices and sections.....	88,935.00			
Total, District 3.....	610,262.50				Total, District 3.....	681,250.00				Total, District 3.....	681,250.00			

1 Includes Coconino Experiment Station.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 4.	DISTRICT 4.	DISTRICT 4.
(Headquarters, Ogden, Utah.)	(Headquarters, Ogden, Utah.)	(Headquarters, Ogden, Utah.)
This district includes Utah, southern Idaho, western Wyoming, eastern and central Nevada, and northwestern Arizona.		
OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.	OFFICE OF DISTRICT FORESTER.
Supervision:	Supervision:	Supervision:
Salaries..... \$4,958.88	Salaries..... \$4,600.00	Salaries..... \$4,600.00
Travel, station, and field expenses..... 1,616.53	Travel, station, and field expenses..... 1,600.00	Travel, station, and field expenses..... 1,600.00
\$6,575.41	\$6,200.00	\$6,200.00
	1,325.55	
Law (see "Law" under Office of Forester and Associate Forester):	Law:	Law:
Salaries..... 5,942.49	Salaries..... 4,700.00	Salaries..... 1,900.00
Travel, station, and field expenses..... 1,032.93	Travel, station, and field expenses..... 1,000.00	Travel, station, and field expenses..... 1,300.00
6,975.42	5,700.00	2,200.00
	Less amount paid from other departmental appropriations..... 3,800.00	
	1,900.00	
Accounts (see "Accounts," Washington):	Accounts:	Accounts:
Salaries..... 7,598.34	Salaries..... 10,074.45	Salaries..... 2,800.00
Travel, station, and field expenses..... 568.57	Travel, station, and field expenses..... 900.00	Travel, station, and field expenses..... 600.00
8,166.91	10,974.45	8,800.00
	Less amount paid from other departmental appropriations..... 2,000.00	
	8,974.45	
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
(See "Lands," District 1.)		
Salaries..... \$950.00	Salaries..... \$7,460.00	Salaries..... \$9,120.00
Travel, station, and field expenses..... 196.92	Travel, station, and field expenses..... 1,891.67	Travel, station, and field expenses..... 2,600.00
1,146.92	9,351.67	11,720.00
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
(See "Operation," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$4,570.82	Salaries..... \$4,400.00	Salaries..... \$4,400.00
Travel, station, and field expenses..... 1,275.20	Travel, station, and field expenses..... 1,600.00	Travel, station, and field expenses..... 1,600.00
5,846.02	6,000.00	6,000.00
(See also expenditures on national forests below).	(See also allotments to national forests below).	(See also estimates for national forests).
Engineering (see "Engineering," District 1):	Engineering:	Engineering:
Salaries of engineers..... 1,850.00	Salaries of engineers..... 1,900.00	Salaries..... 2,100.00
Travel, station, and field expenses..... 1,071.11	Travel, station, and field expenses..... 1,200.00	Travel, station, and field expenses..... 900.00
Salaries of draftsmen..... 5,387.49	Salaries and expenses of draftsmen..... 6,580.00	Salaries and expenses of draftsmen..... 6,580.00
8,308.60	9,680.00	9,580.00
	2,866.02	
Maintenance:	Maintenance:	Maintenance:
Salaries..... 9,221.66	Salaries..... 7,290.00	Salaries..... 7,150.00
Rent..... 3,875.00	Rent..... 6,576.00	Rent..... 3,210.00
Supplies..... 2,961.10	Supplies..... 1,000.00	Supplies..... 800.00
Advertising..... 695.00	Telephone..... 300.00	Telephone..... 340.00
Telephone..... 1,250.00	Freight..... 200.00	Freight..... 200.00
18,002.76	15,366.00	11,700.00
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
(See "Silviculture," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$4,383.17	Salaries..... \$6,520.00	Salaries..... \$8,400.00
Travel, station, and field expenses..... 981.45	Travel, station, and field expenses..... 2,200.00	Travel, station, and field expenses..... 3,200.00
\$5,364.62	\$8,720.00	\$11,600.00
	2,300.00	
Planting:	Contingent fund.....	
Salaries..... 1,850.00		
Expenses..... 538.70		
2,388.70		
OFFICE OF GRAZING.	OFFICE OF GRAZING.	OFFICE OF GRAZING.
(See "Grazing," District 1.)		
Salaries..... \$7,575.00	Salaries..... \$5,400.00	Salaries..... \$4,900.00
Travel, station, and field expenses..... 1,996.35	Travel, station, and field expenses..... 1,600.00	Travel, station, and field expenses..... 1,600.00
\$9,571.35	\$7,000.00	\$6,500.00

<sup>1</sup> Salaries of two assistants to Solicitor paid on statutory rolls of Department of Agriculture.

<sup>2</sup> Salary of district forest agent paid on statutory rolls of Department of Agriculture

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Forests.	Salaries.	Expenses.	Improve- ment.	Fire.	Forests.	Salaries.	Expenses.	Improve- ment.	Total.	Forests.	Salaries.	Ex- pen- ses.	Plant- ing.	Im- prove- ment.
Ashley, Utah.....	\$8,805.28	\$1,737.01	\$2,612.23	.....	Ashley.....	\$12,500.00	\$2,631.64	\$1,719.49	\$16,851.13	Ashley.....	\$13,800	\$1,860	.....	\$1,595
Boise, Idaho.....	16,528.06	4,644.72	4,310.96	.....	Boise.....	20,271.00	5,221.34	1,200.00	26,692.34	Boise.....	20,100	3,620	\$1,500	2,360
Cache, Idaho.....	10,851.66	2,181.18	1,994.40	.....	Cache.....	13,257.50	5,376.50	802.25	19,436.25	Cache.....	16,050	2,095	2,500	2,180
Caribou, Idaho.....	9,992.78	2,145.05	4,393.74	.....	Caribou.....	10,766.00	4,192.00	905.40	15,863.40	Caribou.....	12,300	1,975	2,000	2,005
Challis, Idaho.....	11,459.31	2,064.49	4,095.27	11.50	Challis.....	12,200.00	4,940.00	1,550.00	18,690.00	Challis.....	15,850	1,960	.....	2,920
Dixie, Ariz.....	8,845.29	2,453.54	4,237.10	.....	Dixie.....	9,433.00	2,533.00	1,361.71	13,327.71	Dixie.....	13,300	2,020	.....	2,480
Fillmore, Utah.....	12,195.83	2,335.92	1,519.12	.....	Fillmore.....	13,500.00	4,715.00	928.69	19,143.69	Fillmore.....	14,800	2,250	.....	2,310
Fishlake, Utah.....	9,797.23	1,494.74	2,857.30	17.75	Fishlake.....	10,500.00	2,793.00	1,046.45	14,339.45	Fishlake.....	9,000	1,030	.....	2,195
Humboldt, Nev.....	11,869.90	4,197.17	3,650.97	.....	Humboldt.....	15,230.00	3,796.00	1,400.00	20,426.00	Humboldt.....	20,900	4,010	.....	1,870
Idaho, Idaho.....	12,103.92	2,489.35	4,665.09	134.34	Idaho.....	12,600.00	1,956.65	1,810.00	16,366.65	Idaho.....	17,850	1,355	.....	3,370
Kaibab, Ariz.....	11,780.82	5,258.44	3,790.72	.....	Kaibab.....	13,814.00	3,463.68	1,462.69	18,740.37	Kaibab.....	12,700	2,400	.....	2,150
Lasal, Utah.....	5,799.16	2,416.03	1,481.28	.....	Lasal.....	5,676.00	3,054.00	1,243.76	9,973.76	Lasal.....	6,960	760	.....	550
Lemhi, Idaho.....	11,285.29	3,110.04	3,722.33	.....	Lemhi.....	12,606.00	4,275.00	1,139.40	18,020.40	Lemhi.....	12,750	2,340	.....	2,745
Manti, Utah.....	14,837.77	3,657.12	3,250.00	.....	Manti.....	15,311.00	5,970.33	973.00	22,254.33	Manti.....	16,400	2,255	3,000	2,185
Minidoka, Idaho.....	11,420.69	2,197.26	2,476.35	.....	Minidoka.....	12,500.00	2,408.00	1,002.95	15,910.95	Minidoka.....	13,500	1,125	1,000	2,205
Moapa, Nev.....	1,400.00	618.42	.....	.....	Moapa.....	2,000.00	1,203.00	.....	3,203.00	Moapa.....	2,700	915	.....	.....
Nebo, Utah.....	5,374.72	629.48	1,048.71	6.00	Nebo.....	6,600.00	1,944.00	450.00	8,994.00	Nebo.....	6,650	744	1,000	605
Nevada, Nev.....	12,696.73	3,414.76	3,489.74	44.70	Nevada.....	13,250.00	6,395.00	1,816.20	21,461.20	Nevada.....	17,500	4,730	.....	3,925
Palisade, Idaho.....	5,613.60	716.78	.....	21.60	Palisade.....	14,450.00	2,655.00	1,071.00	18,176.00	Palisade.....	17,000	2,790	.....	840
Payette, Idaho.....	14,266.34	3,597.42	3,479.50	134.20	Payette.....	16,707.00	3,255.00	1,325.00	21,287.00	Payette.....	19,800	4,292	500	3,660
Pocatello, Idaho.....	10,278.90	3,767.91	1,742.68	.....	Pocatello.....	12,100.00	5,346.00	500.00	17,946.00	Pocatello.....	8,225	1,039	5,400	1,475
Powell, Utah.....	9,657.22	610.61	2,259.57	.....	Powell.....	10,400.00	925.00	1,287.89	12,612.89	Powell.....	10,700	780	.....	1,970
Salmon, Idaho.....	19,679.86	7,693.46	5,807.48	77.28	Salmon.....	24,740.00	5,085.00	1,752.00	31,577.00	Salmon.....	29,300	3,995	.....	2,920
Sawtooth, Idaho.....	14,164.95	3,083.98	5,002.90	3.00	Sawtooth.....	15,150.00	5,770.00	1,200.00	22,120.00	Sawtooth.....	18,800	3,050	1,500	2,745
Sevier, Utah.....	11,607.21	1,328.26	2,882.63	.....	Sevier.....	12,050.00	3,470.00	1,033.00	16,553.00	Sevier.....	15,900	1,030	.....	1,580
Targhee, Idaho.....	18,585.87	5,254.33	4,677.16	5.75	Targhee.....	14,964.00	3,571.00	1,509.57	20,044.57	Targhee.....	21,000	3,090	.....	2,140
Teton, Wyo.....	10,135.35	1,380.63	5,184.91	.....	Teton.....	12,150.00	4,420.67	1,929.00	18,499.67	Teton.....	18,000	2,180	.....	3,480
Toiyabe, Nev.....	9,896.39	2,678.06	3,225.05	.....	Toiyabe.....	11,563.00	5,877.00	2,111.03	19,551.03	Toiyabe.....	15,400	2,400	.....	2,005
Uinta, Utah.....	13,768.08	2,761.64	2,571.93	.....	Uinta.....	18,750.00	7,060.00	1,974.00	27,784.00	Uinta.....	18,900	2,760	5,400	1,815
Wasatch, Utah.....	9,771.02	3,282.50	1,452.35	.....	Wasatch.....	12,643.00	4,223.69	691.00	17,557.69	Wasatch.....	8,550	1,440	6,300	1,030
Weiser, Idaho.....	13,665.38	2,814.16	2,588.87	.....	Weiser.....	15,172.00	4,506.00	940.00	20,618.00	Weiser.....	19,850	3,335	1,000	2,685
Wyoming, Wyo.....	10,381.35	2,315.45	3,494.50	.....	Wyoming.....	13,765.00	5,349.00	1,198.50	20,312.50	Wyoming.....	17,200	2,340	.....	3,455
Total.....	358,515.96	88,329.91	98,664.84	773.56	Total.....	416,618.50	128,381.50	39,333.98	584,333.98	Total.....	481,735	71,965	31,100	69,450
SUMMARY.					Fire.....	.....	.....	.....	10,000.00	SUMMARY.				
Forests:	.....	.....	.....	.....	Total, National Forests.....	.....	.....	.....	594,333.98	Salaries.....	.....	\$481,735.00	.....	.....
Salaries.....	.....	.....	\$358,515.96	.....	Offices and sections.....	.....	.....	.....	79,683.69	Expenses.....	.....	71,965.00	.....	.....
Expenses.....	.....	.....	88,329.91	.....	Total, District 4.....	.....	.....	.....	674,017.67	Planting.....	.....	31,100.00	.....	.....
Improvement.....	.....	.....	98,664.84	.....	.....	.....	.....	.....	.....	Improvement.....	.....	69,450.00	.....	.....
Fire.....	.....	.....	773.56	.....	.....	.....	.....	.....	.....	Fire.....	.....	15,000.00	.....	.....
Total.....	.....	.....	546,284.27	.....	.....	.....	.....	.....	.....	Total (forests).....	.....	669,250.00	.....	.....
Offices and sections.....	.....	.....	72,346.71	.....	.....	.....	.....	.....	.....	Offices and sections.....	.....	74,300.00	.....	.....
Total, District 4.....	.....	.....	618,630.98	.....	.....	.....	.....	.....	.....	Total estimated..	.....	743,550.00	.....	.....

Detailed expenditures for the fiscal year ended June 30, 1910.

Salaries, general expenses, and improvements, \$4,646,200—Continued.

DISTRICT OFFICES—Continued.

DISTRICT 5.

(Headquarters San Francisco, Cal.)

This district includes California and south-western Nevada.

OFFICE OF DISTRICT FORESTER.

Supervision:  
Salaries.....\$6,000.67  
Travel, station, and field expenses.....2,111.48  
\$8,112.15

Law (see "Law" under Forester and Associate Forester):  
Salaries.....5,390.84  
Travel, station, and field expenses.....1,465.43  
6,856.27

Accounts (see "Accounts" Washington):  
Salaries.....7,254.17  
Travel, station, and field expenses.....506.73  
7,760.90

Appropriations for the current fiscal year ending June 30, 1911.

Salaries, general expenses, and improvements, \$5,008,100—Continued.

DISTRICT OFFICES—Continued.

DISTRICT 5.

(Headquarters San Francisco, Cal.)

OFFICE OF DISTRICT FORESTER.

Supervision:  
Salaries.....\$5,233.33  
Travel, station, and field expenses.....1,500.00  
\$6,733.33  
Contingent fund.....56,200.50

Law:  
Salaries.....2,940.00  
Travel, station, and field expenses.....500.00  
3,440.00  
Less amount paid from other departmental appropriations. 2,000.00  
1,440.00

Accounts:  
Salaries.....10,050.01  
Travel, station, and field expenses.....1,100.00  
11,150.01  
Less amount paid from other departmental appropriations. 2,000.00  
9,150.01

Estimated expenditures for the fiscal year ending June 30, 1912.

Salaries, general expenses, and improvements, \$5,508,100—Continued.

DISTRICT OFFICES—Continued.

DISTRICT 5.

(Headquarters, San Francisco, Cal.)

OFFICE OF DISTRICT FORESTER.

Supervision:  
Salaries.....\$10,500.00  
Travel, station, and field expenses.....3,400.00  
\$13,900.00

Law:  
Salaries.....1,900.00  
Travel, station, and field expenses.....1,500.00  
2,400.00

Accounts:  
Salaries.....2,677.00  
Travel, station, and field expenses.....300.00  
7,070.00

<sup>1</sup> Salary of assistant to solicitor included on statutory roll, Department of Agriculture.  
<sup>2</sup> Salary of district fiscal agent included in statutory roll, Department of Agriculture.

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200—Continued.	Salaries, general expenses, and improvements, \$5,008,100—Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 5—Continued.	DISTRICT 5—Continued.	DISTRICT 5—Continued.
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
(See "Lands," District 1.)		
Salaries..... \$810.00	Salaries..... \$10,975.83	Salaries..... \$11,020.00
Travel, station, and field expenses... 20.25	Travel, station, and field expenses... 3,000.00	Travel, station, and field expenses... 4,600.00
\$830.25	\$13,975.83	\$15,620.00
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
(See "Operation," District 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... \$5,382.78	Salaries..... \$2,653.08	Salaries..... \$2,860.00
Travel, station, and field expenses... 2,998.72	Travel, station, and field expenses... 700.00	Travel, station, and field expenses... 750.00
\$8,381.50	3,353.08	3,610.00
(See also expenditures on national forests below.)	(See also allotments to national forests below.)	(See also estimates for national forests below.)
Engineering (see "Engineering," District 1):	Engineering:	Engineering:
Salaries of draftsmen..... 5,181.67	Salaries of engineers..... \$6,203.33	Salaries of draftsmen..... 1 4,500.00
	Travel, station, and field expenses... 1,250.00	
	Salaries of draftsmen..... 4,650.00	
	12,103.33	
Maintenance:	Maintenance:	Maintenance:
Salaries..... \$7,262.49	Salaries..... 3,769.00	Salaries..... \$5,420.00
Rent..... 7,458.36	Rent..... 5,986.80	Rent..... 6,767.00
Supplies..... 1,788.50	Supplies..... 800.00	Supplies..... 800.00
Advertising..... 342.21	Telephone..... 300.00	Telephone..... 700.00
Telephone..... 668.19	Freight..... 200.00	Freight and express..... 200.00
Freight..... 100.00	11,055.80	13,887.00
17,619.75		
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
(See "Silviculture," District 1.)		
Supervision:	Supervision:	Salaries..... \$13,000.00
Salaries..... \$3,886.23	Salaries..... \$2,900.00	Travel, station, and field expenses... 5,300.00
Travel, station, and field expenses... 1,050.89	Travel, station, and field expenses... 700.00	18,300.00
4,937.12	\$3,600.00	
Planting:	Timber sales:	
Salaries..... 1,100.00	Salaries..... 2,916.67	
Expenses..... 619.36	Expenses..... 1,300.00	
Experiment Station, Hawaii... 1,942.93		
3,662.29	4,216.67	
	Eucalyptus study in California:	
	Salaries..... 330.00	
	Expenses..... 305.00	
	635.00	
	Experiment station, Hawaii..... 2,000.00	
OFFICE OF GRAZING.	OFFICE OF GRAZING.	OFFICE OF GRAZING.
(See "Grazing," District 1.)		
Salaries..... \$4,812.00	Salaries..... \$5,086.12	Salaries..... \$5,100.00
Travel, station, and field expenses... 1,253.16	Travel, station, and field expenses... 1,400.00	Travel, station, and field expenses... 1,400.00
6,065.66	\$6,486.12	6,500.00
OFFICE OF PRODUCTS.	OFFICE OF PRODUCTS.	OFFICE OF PRODUCTS.
(See "Products," District 1.)		
Supervision:	Salaries..... 5,700.00	Salaries..... 8,700.00
Salaries..... 4,120.00	Travel, station, and field expenses... 3,200.00	Travel, station, and field expenses... 3,300.00
Travel, station, and field expenses... 4,269.27	8,900.00	12,000.00
8,389.27		
Laboratory, Berkeley:		
Salaries..... 2,114.45		
Expenses..... 740.68		
2,855.13		

<sup>1</sup> Salary and expenses of engineer included in office of district forester.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912.				
Salaries, general expenses, and improvements, \$4,646,200—Continued.					Salaries, general expenses, and improvements, \$5,008,100—Continued.					Salaries, general expenses, and improvements, \$5,603,100—Continued.				
DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.				
DISTRICT 5—Continued.					DISTRICT 5—Continued.					DISTRICT 5—Continued.				
Forests in California.	Salaries.	Ex-penses.	Improve-ment.	Fire.	Forests in Cali-fornia.	Salaries.	Ex-penses.	Im-prove-ment.	Total.	Forests in Cali-fornia.	Sala-ries.	Ex-penses.	Plant-ing.	Im-prove-ment.
Angeles.....	\$39,329.15	\$13,522.30	\$13,522.00	\$1,767.80	Angeles.....	\$41,280.00	\$14,428.00	\$2,500	\$58,208.00	Angeles.....	\$42,859	\$7,350	\$12,000	\$10,510
California.....	16,086.22	3,334.83	4,261.31	183.06	California.....	20,210.00	2,529.00	1,800	24,539.00	California.....	21,900	4,844	.....	3,607
Cleveland.....	26,712.57	8,591.02	6,905.00	1,721.03	Cleveland.....	27,000.00	9,440.00	1,800	38,240.00	Cleveland.....	26,200	7,200	8,090	5,550
Eldorado.....	.....	.....	.....	.....	Eldorado.....	9,912.00	1,813.00	2,000	13,725.00	Eldorado.....	16,600	3,580	.....	1,945
Inyo.....	15,502.22	3,736.42	4,000.00	.....	Inyo.....	15,922.00	5,452.00	1,000	22,374.00	Inyo.....	16,400	4,394	.....	3,150
Kern.....	.....	.....	.....	.....	Kern.....	18,216.00	4,996.50	2,250	25,462.50	Kern.....	24,600	4,740	.....	2,850
Klamath.....	23,108.62	5,726.82	8,041.00	1,862.12	Klamath.....	25,990.00	5,070.00	3,400	34,460.00	Klamath.....	27,800	6,243	.....	7,010
Lassen.....	15,525.03	3,245.36	3,875.00	34.75	Lassen.....	16,300.00	2,224.00	3,000	21,524.00	Lassen.....	21,060	4,087	800	4,390
Modoc.....	14,798.88	2,954.69	4,665.00	.....	Modoc.....	15,660.00	3,960.00	2,350	21,970.00	Modoc.....	19,400	4,750	.....	4,240
Mono.....	13,266.95	3,008.95	3,727.42	.....	Mono.....	15,648.00	4,057.00	1,000	20,705.00	Mono.....	20,300	4,475	.....	4,465
Monterey.....	7,934.91	1,549.59	1,147.83	352.75	Monterey.....	5,850.00	1,680.00	500	8,030.00	Monterey.....	6,750	1,805	550	1,160
Plumas.....	24,587.21	6,228.66	4,850.00	800.53	Plumas.....	28,050.00	3,540.00	3,400	34,990.00	Plumas.....	29,800	6,270	800	5,208
Sta. Barbara.....	33,273.88	7,947.79	4,556.00	430.04	Sta. Barbara.....	36,060.00	5,617.00	2,000	43,677.00	Sta. Barbara.....	34,600	5,460	6,000	6,025
Sequoia.....	34,975.25	4,647.64	8,727.20	50.65	Sequoia.....	18,494.00	5,646.00	1,800	25,940.00	Sequoia.....	25,300	4,950	800	3,670
Shasta.....	24,038.89	6,186.10	6,222.02	2,142.46	Shasta.....	27,350.00	7,502.50	3,400	38,252.50	Shasta.....	27,200	6,200	4,500	4,825
Sierra.....	31,584.56	5,177.41	8,035.65	295.70	Sierra.....	34,200.00	4,650.00	3,400	42,250.00	Sierra.....	38,067	7,000	.....	5,550
Stanislaus.....	22,375.59	4,903.32	4,090.00	282.59	Stanislaus.....	26,200.00	4,430.00	3,000	33,630.00	Stanislaus.....	24,133	5,455	.....	4,650
Tahoe.....	26,436.76	6,199.53	6,739.00	2,569.14	Tahoe.....	24,344.00	3,703.50	3,000	31,047.50	Tahoe.....	25,600	6,290	.....	5,180
Trinity.....	18,387.80	5,964.41	7,802.15	1,501.68	Trinity.....	23,287.50	6,240.50	3,400	32,928.00	Trinity.....	26,560	8,000	.....	5,840
Total.....	387,924.49	92,924.84	100,996.58	13,994.30	Total.....	429,973.50	96,979.00	45,000	571,952.50	Total.....	475,120	103,093	33,540	89,825
SUMMARY.					SUMMARY.					SUMMARY.				
Forests:	.....	.....	.....	.....	Forests:	.....	.....	.....	.....	Forests:	.....	.....	.....	.....
Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....
Expenses.....	.....	.....	.....	.....	Expenses.....	.....	.....	.....	.....	Expenses.....	.....	.....	.....	.....
Improvement.....	.....	.....	.....	.....	Improvement.....	.....	.....	.....	.....	Improvement.....	.....	.....	.....	.....
Fire.....	.....	.....	.....	.....	Fire.....	.....	.....	.....	.....	Fire.....	.....	.....	.....	.....
Total.....	.....	.....	.....	.....	Total.....	.....	.....	.....	.....	Total.....	.....	.....	.....	.....
Offices and sections.....	.....	.....	.....	.....	Offices and sections.....	.....	.....	.....	.....	Offices and sections.....	.....	.....	.....	.....
Total district 5.....	.....	.....	.....	.....	Total district 5.....	.....	.....	.....	.....	Total district 5.....	.....	.....	.....	.....

DISTRICT 6.					DISTRICT 6.					DISTRICT 6.				
(Headquarters, Portland, Oreg.)					(Headquarters, Portland, Oreg.)					(Headquarters, Portland, Oreg.)				
This district includes Oregon, Washing-ton, and Alaska.					This district includes Oregon, Washing-ton, and Alaska.					This district includes Oregon, Washing-ton, and Alaska.				
OFFICE OF DISTRICT FORESTER.					OFFICE OF DISTRICT FORESTER.					OFFICE OF DISTRICT FORESTER.				
Supervision:	.....	.....	.....	.....	Supervision:	.....	.....	.....	.....	Supervision:	.....	.....	.....	.....
Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....
Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....
Contingent fund.....	.....	.....	.....	.....	Contingent fund.....	.....	.....	.....	.....	Contingent fund.....	.....	.....	.....	.....
Law:	.....	.....	.....	.....	Law:	.....	.....	.....	.....	Law:	.....	.....	.....	.....
Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....
Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....
Contingent fund.....	.....	.....	.....	.....	Contingent fund.....	.....	.....	.....	.....	Contingent fund.....	.....	.....	.....	.....
Less amount paid from other departmental appropriations.....	.....	.....	.....	.....	Less amount paid from other departmental appropriations.....	.....	.....	.....	.....	Less amount paid from other departmental appropriations.....	.....	.....	.....	.....
Accounts:	.....	.....	.....	.....	Accounts:	.....	.....	.....	.....	Accounts:	.....	.....	.....	.....
Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....	Salaries.....	.....	.....	.....	.....
Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....	Travel, station, and field ex-penses.....	.....	.....	.....	.....
Less amount paid from other departmental appropriations.....	.....	.....	.....	.....	Less amount paid from other departmental appropriations.....	.....	.....	.....	.....	Less amount paid from other departmental appropriations.....	.....	.....	.....	.....

<sup>1</sup> Salaries of two assistants to solicitor paid on statutory roll of Department of Agriculture.  
<sup>2</sup> Salary of district fiscal agent paid on statutory roll of Department of Agriculture.

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—*

*Continued.*

*Forest Service—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, general expenses, and improvements, \$4,646,200— Continued.	Salaries, general expenses, and improvements, \$5,008,100— Continued.	Salaries, general expenses, and improvements, \$5,508,100—Continued.
DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.	DISTRICT OFFICES—Continued.
DISTRICT 6—Continued.	DISTRICT 6—Continued.	DISTRICT 6—Continued.
OFFICE OF LANDS.	OFFICE OF LANDS.	OFFICE OF LANDS.
(See "Lands," district 1.)		
Salaries.....\$1,152.51	Supervision:	Salaries.....\$14,820.00
Travel, station, and field expenses... 1,179.49	Salaries.....\$3,100.00	Travel, station, and field expenses..... 3,700.00
	Travel, station, and field expenses..... 800.00	
\$2,332.00	\$3,900.00	\$18,520.00
	Claims:	
	Salaries..... 2,800.00	
	Travel, station, and field expenses..... 600.00	
	3,400.00	
	Occupancy:	
	Salaries..... 3,660.00	
	Travel, station, and field expenses..... 500.00	
	4,160.00	
	Special:	
	Salaries..... 3,206.23	
	Travel, station, and field expenses..... 2,077.51	
	5,283.74	
OFFICE OF OPERATION (INCLUDING ORGANIZATION).	OFFICE OF OPERATION.	OFFICE OF OPERATION.
(See "Operation," district 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... 7,034.16	Salaries..... 2,900.00	Salaries..... 2,900.00
Travel, station, and field expenses..... 2,805.92	Travel, station, and field expenses..... 800.00	Travel, station, and field expenses..... 800.00
9,840.08	3,700.00	3,700.00
(See also Expenditures on national forests below.)		
Engineering (see "Engineering" district 1):	Geography:	Geography:
Salaries of engineers..... 3,170.83	Salaries and expenses..... 3,360.00	Salary and expenses of draftsmen..... 3,460.00
Travel, station, and field expenses..... 1,726.32	Engineering:	Engineering (salary and expenses of one engineer provided for under office of district forester).
Salaries of draftsmen..... 4,194.00	Salaries of engineers..... 2,400.00	
	Travel, station, and field expenses..... 1,000.00	
9,091.15	3,400.00	
	Contingent fund..... 175.36	
Maintenance:	Maintenance:	Maintenance:
Salaries..... 8,719.67	Salaries..... 6,792.50	Salaries..... 8,200.00
Expenses..... 562.86	Expenses..... 762.50	Expenses..... 500.00
Rent..... 6,325.73	Rent..... 5,672.37	Rent..... 5,672.00
Supplies..... 1,520.42	Supplies..... 1,000.00	Supplies..... 800.00
Advertising..... 673.88	Telephone..... 500.00	Telephone..... 1,121.00
Telephone..... 976.00	Freight..... 200.00	Freight..... 200.00
18,778.56	14,927.37	16,493.00
OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.	OFFICE OF SILVICULTURE.
(See "Silviculture," district 1.)		
Supervision:	Supervision:	Supervision:
Salaries..... 4,895.27	Salaries..... 6,260.00	Salaries..... 13,360.00
Travel, station, and field expenses..... 1,084.98	Travel, station, and field expenses..... 1,400.00	Travel, station, and field expenses..... 4,400.00
5,980.25	7,660.00	17,760.00
Planting:	Planting:	
Salaries..... 1,300.00	Salaries..... 1,400.00	
Expenses..... 4,036.20	Travel, station, and field expenses..... 600.00	
5,336.20	2,000.00	
	Contingent fund..... 100.00	
Silvics (see "Silvics," district 2):	Silvics:	
Salaries..... 1,143.61	Salaries..... 3,023.00	
Travel, station, and field expenses..... 495.00	Travel, station, and field expenses..... 2,220.00	
1,638.61	5,243.00	
	Special:	
	Salaries..... 4,033.34	
	Travel, station, and field expenses..... 2,268.41	
	6,301.75	
OFFICE OF GRAZING.	OFFICE OF GRAZING.	OFFICE OF GRAZING.
(See "Grazing," district 1.)		
Salaries..... 4,168.33	Salaries..... 3,493.30	Salaries..... 2,660.00
Travel, station, and field expenses... 1,464.08	Travel, station, and field expenses... 1,415.66	Travel, station, and field expenses..... 800.00
5,632.41	4,908.96	3,460.00

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

*Forest Service—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912.				
<i>Salaries, general expenses, and improvements, \$4,646,200—Continued.</i>					<i>Salaries, general expenses, and improvements, \$5,008,100—Continued.</i>					<i>Salaries, general expenses, and improvements, \$5,508,100—Continued.</i>				
DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.					DISTRICT OFFICES—Continued.				
DISTRICT 6—Continued.					DISTRICT 6—Continued.					DISTRICT 6—Continued.				
OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.					OFFICE OF PRODUCTS.				
(See "Products," district 1.)														
Supervision:					Supervision:					Supervision:				
Salaries..... \$4,849.00					Salaries..... \$6,362.00					Salaries.....				
Travel, station, and field expenses..... 2,656.27					Travel, station, and field expenses..... 2,338.00					Travel, station, and field expenses.....				
\$7,505.27					\$8,700.00									
Laboratory, Seattle:					Laboratory, Seattle:					Laboratory, Seattle:				
Salaries..... 2,851.67					Salaries..... 3,600.00					Salaries..... \$10,900.00				
Expenses..... 1,742.12					Expenses..... 1,000.00					Travel, station, and field expenses..... 4,100.00				
4,593.79					4,600.00					Equipment..... 750.00				
										\$15,750.00				
Forests.	Salaries.	Expenses.	Im- prove- ment.	Fire.	Forests.	Salaries.	Expenses.	Im- prove- ment.	Total.	Forests.	Salaries.	Ex- penses.	Plant- ing.	Im- prove- ment.
Cascade, Oreg.....	\$16,093.64	\$3,126.07	\$6,646.50	\$300.80	Cascade.....	\$20,200.00	\$6,500.00	\$2,971.62	\$29,671.62	Cascade.....	\$15,050	\$4,350		\$6,927
Chelan, Wash.....	21,465.13	5,258.80	7,855.50	688.44	Chelan.....	30,425.00	9,348.35	2,500.00	42,273.35	Chelan.....	13,425	3,120		1,241
Chugach and Tongass, Alaska.....	13,366.89	9,057.07	1,400.00		Chugach and Tongass.....	10,650.00	7,104.00	2,500.00	20,254.00	Chugach and Tongass.....	12,600	10,000		1,595
Columbia, Wash.....	11,512.45	9,124.21	5,328.00	128.45	Columbia.....	15,347.00	4,540.55	1,575.00	21,462.55	Columbia.....	12,825	4,058	\$4,000	4,320
Colville, Wash.....	13,699.96	4,183.54	3,086.50	794.15	Colville.....	14,820.00	6,955.00	1,150.00	22,925.00	Colville.....	16,300	4,585		1,640
Crater, Oreg.....	19,413.99	6,549.85	5,675.12	1,155.50	Crater.....	24,130.00	5,920.95	6,049.63	36,100.58	Crater.....	21,250	6,960	1,000	8,155
Deschutes, Oreg.....	15,747.03	4,456.81	5,049.00		Deschutes.....	22,080.00	5,593.34	1,604.37	29,277.71	Deschutes.....	14,000	2,660		1,224
Fremont, Oreg.....	16,546.28	4,526.57	5,215.00	134.05	Fremont.....	20,310.00	4,770.00	1,721.22	26,801.22	Fremont.....	14,100	3,060		1,640
Malheur, Oreg.....	11,090.01	1,981.91	4,025.32	14.00	Malheur.....	15,550.00	2,992.00	1,521.31	20,063.31	Malheur.....	19,475	3,250		1,643
Minam, Oreg.....					Minam.....					Minam.....	7,600	2,080		
Ochoco, Oreg.....					Ochoco.....					Ochoco.....	16,660	2,410		1,240
Okanogan, Wash.....	14,915.55	10,135.65	8,810.00	12.00	Okanogan.....	23,389.00	5,740.15	3,467.60	32,596.75	Okanogan.....	22,350	3,560		2,035
Olympic, Wash.....	25,204.32	7,918.87	6,980.37	794.04	Olympic.....	30,524.00	5,464.99	2,442.79	38,431.78	Olympic.....	20,600	5,260	2,700	7,340
Oregon, Oreg.....	16,176.62	2,804.35	5,893.00	1,426.46	Oregon.....	19,403.00	4,045.97	2,123.00	25,571.97	Oregon.....	24,113	4,434	4,000	4,065
Paulina, Oreg.....	11,252.02	7,305.80	4,119.89		Paulina.....	13,482.00	5,450.00	1,107.30	20,039.30	Paulina.....	13,200	3,865		1,215
Rainier, Wash.....	14,324.74	3,352.10	4,893.68	1,384.50	Rainier.....	17,250.00	3,323.00	3,129.00	23,702.00	Rainier.....	23,450	2,550		6,525
Santiam, Oreg.....	14,022.84	8,429.40	7,493.74	98.10	Santiam.....	18,946.00	8,835.71	950.00	28,731.71	Santiam.....	10,700	3,300		2,440
Siushaw, Oreg.....					Siushaw.....					Siushaw.....	14,750	2,965	7,500	1,685
Siskiyou, Oreg.....					Siskiyou.....					Siskiyou.....	20,275	4,698	1,700	8,175
Snoqualmie, Wash.....					Snoqualmie.....					Snoqualmie.....	19,000	5,720	4,500	6,930
Tongass (see Chugach, Alaska).....					Tongass.....	5,358.00	2,942.00		8,300.00	Tongass.....	14,500	7,040		
Umatilla, Oreg.....	9,746.95	1,448.18	2,026.50		Umatilla.....	11,725.00	4,200.00	744.80	16,669.80	Umatilla.....	12,800	2,675	500	1,000
Umpqua, Oreg.....	19,145.06	5,258.74	7,679.12	347.67	Umpqua.....	24,400.00	6,607.21	1,850.00	32,857.21	Umpqua.....	18,950	4,919		4,480
Wallowa, Oreg.....	15,114.36	5,115.53	6,497.05	119.18	Wallowa.....	19,427.50	5,982.50	2,392.00	27,802.00	Wallowa.....	15,550	3,475	500	2,490
Washington, Wash.....	17,270.95	3,491.86	6,324.89	827.87	Washington.....	17,270.28	4,825.25	2,440.00	24,535.53	Washington.....	20,580	4,215	500	6,510
Wenaha, Oreg.....	12,643.43	2,514.20	2,960.65	2.50	Wenaha.....	13,300.00	2,995.00	1,110.00	17,405.00	Wenaha.....	14,840	2,925	500	1,240
Wenatchee, Wash.....	19,612.95	4,225.80	6,084.33	6,532.90	Wenatchee.....	18,500.00	3,132.00	1,400.00	23,032.40	Wenatchee.....	17,900	3,835	500	1,635
Whitman, Oreg.....	17,077.31	4,308.21	5,330.29	108.66	Whitman.....	20,592.50	4,765.09	1,675.00	27,032.59	Whitman.....	19,000	6,155	500	2,435
Total.....	345,442.48	114,573.52	119,374.45	14,869.27	Total.....	427,079.28	122,033.46	46,424.64	595,537.38	Total.....	465,843	118,124	28,400	89,825
SUMMARY.					SUMMARY.					SUMMARY.				
Forests:					Forests:					Forests:				
Salaries..... \$345,442.48					Salaries..... \$465,843					Salaries..... \$465,843				
Expenses..... 114,573.52					Expenses..... 118,124					Expenses..... 118,124				
Improvement..... 119,374.45					Planting..... 28,400					Planting..... 28,400				
Fire..... 14,869.27					Improvement..... 89,825					Improvement..... 89,825				
					Fire..... 30,000					Fire..... 30,000				
Total..... 594,259.72					Total..... 729,553.00					Total..... 732,192				
Offices and sections..... 92,211.94										Offices and sections..... 100,783				
Total, district 6..... 686,471.66										Total, district 6..... 832,975				
SUMMARY.					SUMMARY.					SUMMARY.				
General..... \$673,884.83					General (including contingent fund)..... \$748,668.16					General (including contingent fund)..... \$779,360.00				
District 1..... 729,784.01					District 1..... 817,536.00					District 1..... 905,950.00				
District 2..... 628,238.07					District 2..... 663,370.00					District 2..... 735,650.00				
District 3..... 610,262.50					District 3..... 643,153.00					District 3..... 681,250.00				
District 4..... 618,630.98					District 4..... 674,017.67					District 4..... 743,550.00				
District 5..... 676,492.17					District 5..... 731,802.17					District 5..... 829,365.00				
District 6..... 686,471.66					District 6..... 729,553.00					District 6..... 832,975.00				
Total..... 4,623,764.22					Total..... 5,008,100.00					Total..... 5,508,100.00				
Unexpended balance..... 22,435.78														
Total appropriation..... 4,646,200.00														

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.					Appropriations for the current fiscal year ending June 30, 1911.					Estimated expenditures for the fiscal year ending June 30, 1912.				
Expenditures on national forests in States and Territories.					Allotments to national forests distributed among States and Territories.					Estimates for national forests distributed among States and Territories.				
Names.	General expenses.	Improvement.	Fire.	Total.	Names.	Salaries.	Ex-penses.	Improvement.	Total.	Names.	Salaries and ex-penses.	Im-provement.	Plant-ing.	Total.
Alaska.....	\$22,423.96	\$1,400.00		\$23,823.96	Alaska.....	\$16,008.00	\$10,046.00	\$2,500.00	\$28,554.00	Alaska.....	\$44,140	\$1,595		\$45,735
Arizona.....	208,225.19	46,764.93	\$6,199.94	261,190.06	Arizona.....	195,821.00	51,072.81	24,724.40	271,618.21	Arizona.....	248,971	36,330	\$4,200	289,501
Arkansas.....	38,238.69	9,223.71	3,600.64	51,063.04	Arkansas.....	38,248.00	16,986.86	1,800.00	57,034.86	Arkansas.....	50,000	5,880	900	56,780
California.....	480,849.33	100,996.58	13,994.30	595,840.21	California.....	429,973.50	96,979.00	45,000.00	571,952.50	California.....	578,213	89,825	33,540	701,578
Colorado.....	296,517.51	40,957.80	1,622.41	339,097.72	Colorado.....	260,427.50	73,054.59	27,753.10	361,235.19	Colorado.....	349,270	47,592	8,000	404,862
Florida.....	11,164.33	1,541.41	58.54	12,764.28	Florida.....	11,000.00	3,623.00	2,000.00	16,623.00	Florida.....	14,590	4,080	600	19,270
Idaho.....	361,140.37	78,742.88	16,469.10	456,352.35	Idaho.....	348,367.50	81,279.99	30,792.57	460,440.06	Idaho.....	468,011	78,314	23,900	570,225
Kansas.....	6,276.00	283.14		6,559.14	Kansas.....	3,400.00	4,203.00		7,603.00	Kansas.....	3,480	240	4,500	8,220
Michigan.....	2,750.80	140.79		2,891.59	Michigan.....	4,360.00	1,930.00		6,290.00	Michigan.....	5,250	1,632	1,500	8,382
Minnesota.....	26,237.54	4,027.01	2,233.18	32,497.73	Minnesota.....	28,810.00	7,276.00	400.00	36,486.00	Minnesota.....	35,635	4,080	250	39,965
Montana.....	367,800.16	62,606.65	3,781.83	434,188.64	Montana.....	355,378.00	72,295.50	26,905.00	454,578.50	Montana.....	417,695	51,734	22,300	491,729
Nebraska.....	13,942.96	1,215.83	52.20	15,210.99	Nebraska.....	8,516.00	7,874.00	124.00	16,514.00	Nebraska.....	6,325	720	6,000	13,045
Nevada.....	46,771.43	11,065.76	44.70	57,881.89	Nevada.....	42,043.00	17,271.00	5,327.23	64,641.23	Nevada.....	68,555	7,800		76,355
N. Mexico.....	175,702.52	34,268.26	1,861.13	211,831.91	N. Mexico.....	157,159.72	50,133.79	16,159.00	223,452.51	N. Mexico.....	204,274	25,750	6,900	236,924
N. Dakota.....		40.00		40.00	N. Dakota.....			500.00	500.00	N. Dakota.....	775	490	1,200	2,465
Oklahoma.....	5,961.33	902.66	4.75	6,868.74	Oklahoma.....	4,600.00	1,100.00	500.00	6,200.00	Oklahoma.....	12,450	2,040	400	14,890
Oregon.....	261,261.98	67,098.49	4,360.90	332,721.37	Oregon.....	252,971.00	64,564.08	28,319.04	345,854.12	Oregon.....	336,494	50,054	16,200	402,748
S. Dakota.....	37,407.32	3,169.51	4,958.74	45,535.57	S. Dakota.....	36,966.00	10,634.00	2,820.00	50,420.00	S. Dakota.....	39,151	3,977	8,350	51,478
Utah.....	133,165.66	26,172.22	23.75	159,361.63	Utah.....	117,930.00	36,786.66	11,347.28	166,063.94	Utah.....	136,569	15,835	15,700	168,104
Washington.....	176,330.06	50,875.96	10,508.37	237,714.39	Washington.....	158,100.28	47,423.38	15,605.60	221,129.26	Washington.....	203,333	38,176	12,200	253,709
Wyoming.....	119,108.48	29,749.13	1,282.36	150,139.97	Wyoming.....	120,703.50	28,605.99	14,192.50	163,501.99	Wyoming.....	158,984	23,856		182,840
Total.....	2,791,275.62	571,242.72	71,056.84	3,433,575.18	Total al-lotted.....	2,590,783.00	683,139.65	256,769.72	3,530,692.37	Total esti-mated.....	3,382,165	490,000	166,640	4,038,805
					Contingent funds.....				30,418.26	Fire fighting.....				135,000
					Fire fighting.....				135,000.00	Total na-tional forests.....				4,173,805
					Total na-tional forests.....				3,696,110.63					
Salaries, general expenses, and improvements, \$4,646,200—Continued.					Salaries, general expenses, and improvements, \$5,008,100—Continued.					Salaries, general expenses, and improvements, \$5,508,100—Continued.				
The amounts paid for improvement work on the national forests are classified as follows:					The amounts allotted for improvement work on the national forests are classified as follows:					The amounts estimated for improvement work on the national forests are classified as follows:				
Construction:					Construction:					Construction:				
Roads.....		\$27,385.26			Roads.....		\$19,180.00			Roads.....		\$26,318.00		
Trails.....		134,616.37			Trails.....		107,301.00			Trails.....		149,742.00		
Telephone lines.....		82,732.46			Telephone lines.....		50,118.00			Telephone lines.....		111,779.00		
Fire lines.....		1,445.96			Fire lines.....		14,173.00			Fire lines.....		10,851.00		
Fences for administration.....		54,479.23			Fences for administration.....		6,147.00			Fences for admin-istration.....		21,045.00		
Fences for stock under permit..		1,849.29			Fences for stock under permit.....		465.00			Fences for stock under permit.....		830.00		
Corrals.....		2,134.49			Corrals.....					Corrals.....				
Bridges.....		9,718.69			Bridges.....		4,494.00			Bridges.....		3,112.00		
Houses.....		110,896.01			Houses.....		11,838.00			Houses.....		69,603.00		
Barns.....		35,188.36			Barns.....		2,133.00			Barns.....		29,506.00		
				\$460,446.12					\$215,849.00					\$425,786.00
Repairs:					Repairs:					Repairs:				
Roads, trails, bridges, etc.....		15,982.66			Roads, trails, bridges, etc.....		23,214.00			Roads, trails, bridges, etc.....		26,424.00		
Telephone lines.....		5,703.20			Telephone lines.....		999.00			Telephone lines.....		5,883.00		
Houses and barns.....		25,561.68			Houses and barns.....		9,148.00			Houses and barns.....		23,201.00		
Fences and corrals.....		3,031.77			Fences and corrals.....		2,855.00			Fences and cor-rals.....		2,671.00		
				50,279.31					36,216.00					58,179.00
Water development.....		10,536.17			Water development.....				3,366.00	Water development.....				4,525.00
Improvements purchased.....		14,655.13			Improvements purchased.....					Improvements purchased.....				
Permanent equipment.....		12,894.62			Permanent equipment.....					Permanent equipment.....				1,510.00
Miscellaneous improvements.....		22,431.37			Miscellaneous improvements.....				1,338.72	Miscellaneous improvements.....				
Total.....				571,242.72	Total.....				256,769.72	Total.....				490,000.00
Engineering and drafting.....				27,592.92	Supervision of engineering, etc.....				18,230.28					
Total expenditures.....				598,835.64	Total appropriation.....				275,000.00					
Unexpended balance.....				1,164.36										
Total appropriation.....				600,000.00										
Cooperative work, forest investigations, \$40,670.39.					Cooperative work, forest investigations, \$20,000.					Cooperative work, forest investigations.				
This appropriation is made up of the amounts received and covered into the United States Treasury as contributions from private individuals and corporations toward cooperative work in forest investigations (34 Stat. L., 684).					Carried over the fiscal year 1910.....					Approximate estimate.....				
Expenditures were as follows:					Estimated receipts for the fiscal year 1911.....									
Salaries in and out of Washington.....		\$17,072.36			Total.....				20,000.00					
Miscellaneous supplies, etc.....		14,809.91			It is not practicable to make an advance estimate of the probable amount that will be expended for salaries, expenses, etc., from this fund.									
Freight.....		502.71												
Express.....		.35												
Apparatus, instruments, and laboratory material.....		125.00												
Travel and station and field expenses.....		8,164.66												
Total.....		40,674.99												
Less repayments.....		4.60												
Net total expenditures July 1, 1909, to June 30, 1910.....				40,670.39										

*Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.*

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Cooperative work, forest investigations, \$40,670.39—Continued.</i>	<i>Cooperative work, forest investigations, \$20,000—Continued.</i>	<i>Cooperative work, forest investigation—Cont'd.</i>
Distributed among projects as follows:	The allotment is distributed as follows:	
SILVICULTURE.	Silviculture .....	
Planting plans, preliminary examinations of woodlots and timberlands, working plans and studies of forest conditions in cooperation with States, corporations, and private individuals.	\$8,547.95	
Salaries..... \$12,097.10		
Travel and station and field expenses..... 17,366.22		
\$29,463.32		
PRODUCTS.	Products.....	
Timber tests; studies and experiments in the treatment of ties, telephone and telegraph poles, mine props, and other structural timbers; chemical analyses of woods and wood products; pulp-wood experiments, etc.	11,452.05	
Salaries..... \$4,973.26		
Travel and station and field expenses 4,994.21		
9,967.47		
Unexpended balances returned to contributors. 1,239.60		
Total expended July 1, 1909, to June 30, 1910..... 40,670.39	Total..... 20,000.00	
This money was received from contributors as follows:		
Alabama Wood Preserving Co..... 450.00		
Anaconda Copper Mining Co..... 2,000.00		
Andrews, Edwin R..... 15.00		
Berkeley, Miss L. F..... 5.00		
Berkeley Chamber of Commerce..... 25.00		
Black, L. C..... 100.00		
Burns, Edw. M..... 100.00		
Cashie & Chowan R. R. & L. Co..... 50.00		
Caspar Lumber Co..... 40.00		
Central Colorado Power Co..... 988.65		
Chicago Board of Local Improvements..... 20.00		
Colorado Fuel & Iron Co..... 242.55		
Colorado Midland Railway Co..... 397.52		
Cooke, Chas. B..... 20.00		
Dunbar, F. C..... 25.00		
Eagle Shawmut Mining Co..... 50.00		
Elam, S. S..... 10.00		
Ellis, Ralph..... 15.00		
Ephraim Coal & Coke Co..... 50.00		
Farquhar, A. B..... 4.96		
Fell, E. Nelson..... 15.00		
Floriston Pulp & Paper Co..... 150.00		
Grace, Fred J..... 250.00		
Hahnman, Wm..... 10.00		
Hammond, W. W..... 15.00		
Hartwell, J. A..... 15.00		
Herndon, Edw. L..... 30.00		
Hoag, C. C..... 15.00		
Holden, Wm. C..... 15.00		
Homestake Mining Co..... 767.50		
Hudson, P. K..... 20.00		
Kennett Cypress & Hardwood Co..... 50.00		
Kentucky, State of..... 1,750.00		
Kibbey, R. C..... 25.00		
Lang, Jos. M..... 10.00		
Lehman, S. M..... 50.00		
Leighton, Geo. B..... 15.00		
McLane, Chas. E..... 5.00		
Massachusetts, Commonwealth of..... 215.00		
Mississippi, Governor of..... 200.00		
New Hampshire Forestry Association..... 64.77		
Nichols, John W..... 10.00		
Northern Pacific Ry. Co..... 16,000.00		
Reed, Robt..... 1,251.96		
Rutherford, Della..... 2.00		
Simms, Wm. E..... 15.00		
Smuggler Union Mining Co..... 100.00		
South Carolina, Governor of..... 200.00		
Southern Ry. Co..... 126.00		
Spalding, C. W..... 10.00		
Stachel, A. E..... 15.00		
Sutro, Adolph (estate of)..... 40.00		
Tennessee Coal, Iron & R. R. Co..... 2,000.00		
Union Bag & Paper Co..... 150.00		
Urania Lumber Co..... 50.00		
Virginia, Commonwealth of..... 250.00		
Virginia State Farmers' Institute..... 8.44		
Virginia, University of..... 25.00		
Whitacre, H. J..... 15.00		
White Lumber Co., L. E..... 40.00		
Winnisook Club..... 30.00		
Witherbee, Sherman & Co. (Inc.)..... 30.00		
Zabriskie, George..... 10.00		
Total..... 28,674.35		
On hand July 1, 1909..... 19,291.25		
Total..... 47,965.60		
Carried over to fiscal year 1911..... 7,295.21		
Expended fiscal year 1910..... 40,670.39		

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## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>Naval stores industry, \$1,046.13.</i></p> <p>To enable the Secretary of Agriculture to inquire into the destruction of forests by the production of turpentine and resin, and the sources and methods of said industry, and in cooperation with the Bureau of the Census, to report upon the production of the naval stores industry (agricultural act May 23, 1908).</p> <p>Total appropriation..... \$10,000.00</p> <p>Expended in fiscal year 1909..... 8,949.32 Carried over to fiscal year 1911..... 4.55 Expended in fiscal year 1910..... 1,046.13</p> <p>Expenditures were as follows:</p> <p>Salaries out of Washington..... 54.17 Miscellaneous supplies and services, etc.... 359.97 Apparatus, instruments, and laboratory material..... 353.26 Travel and station and field expenses..... 278.73</p> <p>Total..... 1,046.13</p> <p><i>Paper tests, \$9,560.75.</i></p> <p>To enable the Secretary of Agriculture to test such plants and woods as may require tests to ascertain if they be suitable for making paper.</p> <p>Total appropriation..... 10,000.00 Allotted to Forest Service..... 9,560.00</p> <p>(See also Bureau of Plant Industry.)</p> <p>Expenditures were as follows:</p> <p>Salaries..... 4,631.67 Miscellaneous supplies and services, etc.... 4,815.52 Fuel..... 16.00 Travel and station and field expenses..... 95.88</p> <p>Total expenditures to Aug. 31, 1910..... 9,559.07 Balance to be returned to the Treasury... 1.68</p> <p>Total appropriation..... 9,560.75</p> <p>The tests and experiments provided for in this appropriation were made by the soda and sulphite process in the Forest Service products chemical laboratory at Madison, Wis. A large variety of woods and wood waste previously untried commercially for this purpose were experimented with to determine if practicable to use in paper manufacture.</p> <p><i>National bison range, \$47,391.22.</i></p> <p>This appropriation was originally for the purchase of not to exceed 12,800 acres of land from unallotted lands embraced within the Flathead Indian Reservation, State of Montana, and the construction thereon of a good, substantial fence and the necessary sheds and buildings for a permanent national bison range for the herd of bison to be presented by the American Bison Society. \$30,000 was appropriated to enable the Secretary of the Interior to pay the Indians and others entitled the appraised value of the land and \$10,000 to enable the Secretary of Agriculture to build the fence, sheds, and buildings (agricultural act May 23, 1908). On Mar. 4, 1909, the original sum was reappropriated to be expended "in fencing said lands, the erection thereon of the necessary sheds and buildings, and enlarging the limits heretofore established so as to make the total acreage not to exceed 20,000 acres," and \$3,000 was added to provide for the additional cost of fence (deficiency appropriation, Mar. 4, 1909). \$7,700 was added by the deficiency act of Feb. 25, 1910, to provide for the construction of additional improvements regarded as necessary.</p> <p>(Total appropriation, \$50,700; expended in fiscal year 1909, \$219.60; carried over to fiscal year 1911, \$3,089.18; net amount available for fiscal year 1910, \$47,391.22.)</p> <p>Expenditures were as follows:</p> <p>Salaries out of Washington..... \$52.78 Miscellaneous supplies and services, etc.... 15,234.32 Fuel..... 20.00 Freight..... 1,784.56 Express..... 24.00 Travel and station and field expenses..... 379.28 Land purchased..... 29,896.48</p> <p>Total..... 47,391.42 Less repayments..... .20</p> <p>Net total..... 47,391.22</p>	<p><i>Naval stores industry, \$4.55.</i></p> <p>(Balance carried over from fiscal year 1910.)</p> <p>Allotted as follows:</p> <p>Miscellaneous supplies and services, etc... \$4.55</p> <p><i>Paper tests, 1910, 1911, \$30,000.</i></p> <p>(No expenditures during 1910.)</p> <p>(NOTE.—The tests and experiments under this appropriation are being made by the branch of forest products at Wausau, Wis., and are confined to ground wood pulp. The chemical experiments noted as made during the fiscal year 1910 at the Madison laboratory are being continued, but the expenses are provided for under the subappropriation "Paper tests, general expenses, Forest Service, 1911.")</p> <p>Allotted as follows:</p> <p>Miscellaneous supplies and services, etc... 22,000.00 Travel and station and field expenses... 1,000.00 Contingent unallotted..... 7,000.00</p> <p>Total..... 30,000.00</p> <p><i>National bison range, \$3,089.18.</i></p> <p>This is the unexpended balance on hand on July 1, 1910, and available for expenditure during the fiscal year 1911.</p> <p>Allotted as follows:</p> <p>Miscellaneous supplies and services, etc... \$2,374.18 Freight..... 500.00 Travel and station and field expenses... 125.00 Land purchase..... 90.00</p> <p>Total..... 3,089.18</p>	<p>(No estimate for 1912.)</p> <p>Provided for under "General expenses, Forest Service."</p> <p>(No estimate for 1912.)</p>

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<b>SUMMARY BY APPROPRIATIONS.</b>	<b>SUMMARY BY APPROPRIATIONS.</b>	<b>SUMMARY BY APPROPRIATIONS.</b>
<i>Expenditures (including unpaid liabilities on Aug. 31, 1910).</i>	<i>Allotments.</i>	<i>Estimates.</i>
Regular appropriations:	Regular appropriations:	Regular appropriations:
Statutory salaries..... \$59,455.90	Salaries..... \$60,200.00	Salaries..... \$2,318,650.00
General expenses..... 3,965,472.68	General expenses..... 4,589,443.62	General expenses, including
Improvement of the national forests..... 598,835.64	Improvement..... 275,000.00	Improvement..... 3,189,420.00
Total..... 4,623,764.22	Total..... 4,924,643.62	Total..... 5,508,100.00
Unexpended balances to be returned to the Treasury (estimated)..... 22,435.78	Forester's contingent..... 83,456.38	
Total, regular appropriations..... 4,646,200.00	Total..... 5,008,100.00	
Expenditures from regular appropriations as above..... 4,623,764.22		
Miscellaneous payments:	Miscellaneous appropriations and estimates:	Miscellaneous estimates:
Cooperative work..... \$40,670.39	Cooperative work..... \$20,000.00	Cooperative work.... \$25,000
Naval stores industry..... 1,046.13	Naval stores industry..... 4.55	Refunds to depositors..... 50,000
Paper tests..... 9,559.07	Paper tests, 1910-11..... 30,000.00	Returns to States..... 550,000
National bison range..... 47,391.22	National bison range..... 3,059.18	Payments to Uinta Indians..... 6,800
Refunds to depositors, excess deposits, etc. (34 Stat., 1270)..... 48,966.86	Refunds to depositors..... 50,000.00	
Returns to States and Territories, 25 per cent of receipts from forest resources (fiscal year 1909)..... 438,702.81	Returns to States and Territories..... 506,194.84	Grand total..... 6,139,900.00
Proceeds sale of timber Uinta Indian lands (collected by the Forest Service and paid to the Indians through the Treasury Department)..... 1,113.47	Payments to Uinta Indians.. 2,446.84	
	611,735.41	
Grand total expended..... 5,211,214.17	Total..... 5,619,835.41	
Unexpended balances to be returned to the Treasury (estimated)—		NOTE.—The increase of \$500,000 in the total appropriations for salaries, general expenses, and improvements, Forest Service, is made up as follows:
Salaries..... 744.10		Forest products..... \$55,400
General expenses..... 20,527.32		\$30,000 for ground-wood paper tests. This was a special appropriation in the sundry civil bill last year, and did not appear in the agricultural appropriation.
Improvements..... 1,164.36		\$25,400 for general increase of scientific work, distributed generally throughout the various projects undertaken in connection with the laboratory and in the field.
Paper tests..... 1.68		Grazing studies..... 6,600
22,437.46		This increase is desired for the payment of the salaries and traveling expenses of three new investigators.
Total of all Forest Service appropriations..... 5,233,651.63		Reforestation..... 100,000
		This increase is for additional reforestation and is urgently recommended. It is desired during the next year to collect not less than 40,000 to 50,000 pounds of seed, and to reforest with it 40,000 to 50,000 acres.
		Additional fire patrol..... 120,000
		A larger fire patrol than at present is needed even in the normal seasons. The amount asked for will enable the Forest Service to increase its patrol service during the dry season by about 500 men, or an average of about 4 men on each of the forests requiring additional patrol.
		Permanent improvements..... 215,000
		Total..... 500,000

## NATIONAL FOREST RECEIPTS.

State.	Name of national forest.	Timber sales.	Timber settlement.	Timber trespass.	Grazing.	Grazing trespass.	Special uses.	Fire trespass.	Gross receipts.	Refunds.	Net receipts.
Arizona.....	Apache.....	\$1,968.75		\$8.85	\$12,019.50	\$15.00	\$213.24		\$14,225.34		\$14,225.34
	Chiricahua <sup>1</sup> .....	601.27		2.36	2,028.35		7.09		2,639.07		2,639.07
	Coconino.....	78,849.59	\$33.44	242.00	32,391.41		799.65		112,316.09	\$3,221.19	109,094.90
	Coronado.....	483.30			6,215.18		718.00		7,416.48	3.16	7,413.32
	Crook.....	6,843.25			5,467.68		291.50		12,602.43	55.00	12,547.43
	Dixie <sup>1</sup> .....	184.23			1,804.92		16.19		2,010.34		2,010.34
	Garces.....	983.25			4,410.78		91.75		5,455.78	15.05	5,470.73
	Kaibab.....	43.48			4,441.36		20.46		4,505.30		4,505.30
	Prescott.....	3,186.17	195.39	740.03	19,682.17		551.48		24,355.24	1,493.25	22,861.99
	Sitgreaves.....	256.34			9,581.62	60.00	40.10		9,938.06	1,301.57	8,636.49
	Tonto.....	259.10			14,724.19	50.00	42.75		15,076.04	524.80	14,551.24
	Zuni <sup>1</sup> .....	40.19			888.35	36.80	5.57		970.91	9.51	961.40
	Total Arizona.....	93,698.92	228.83	993.24	113,660.51	161.80	2,797.78		211,541.08	6,623.53	204,917.55
Arkansas.....	Arkansas.....	6,863.91		2,867.27	4.48		275.50		10,011.16	19.86	9,991.30
	Ozark.....	369.78		1,075.57	103.05		138.57		1,686.97	60.51	1,626.46
	Total Arkansas.....	7,233.69		3,942.84	107.53		414.07		11,698.13	80.37	11,617.76

<sup>1</sup> Partly in another State. Receipts prorated according to area.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

## NATIONAL FOREST RECEIPTS—Continued.

State.	Name of national forest.	Timber sales.	Timber settlement.	Timber trespass.	Grazing.	Grazing trespass.	Special uses.	Fire trespass.	Gross receipts.	Refunds.	Net receipts.
California.....	Angeles.....	\$3,026.25	\$54.05	\$34.00	\$1,743.35		\$11,084.08	\$123.50	\$16,065.23	\$66.00	\$15,999.23
	California.....	184.80		160.32	5,889.39	\$12.00	1,480.00		7,726.51	153.10	7,573.41
	Cleveland.....	56.00		57.08	2,268.75	38.50	509.79	70.00	3,000.12	26.60	2,973.52
	Crater <sup>1</sup> .....	1,277.50	18.95	.65	63.23	1.20	7.87		1,369.40	.26	1,369.14
	Inyo <sup>1</sup> .....	2,735.67	941.52		3,839.59		683.18		8,199.96	188.85	8,011.11
	Klamath.....	2,075.65		38.69	1,934.54		130.06		4,178.94	199.08	3,979.86
	Lassen.....	308.19	318.54	352.28	6,490.67		122.26		7,591.94	109.24	7,482.70
	Modoc.....	2,605.57		50.00	14,047.60	20.20	103.20		16,826.57	627.03	16,199.54
	Mono <sup>1</sup> .....	3,980.18	60.32	2,159.75	4,064.14	90.48	395.58		10,750.45	44.43	10,706.02
	Monterey.....	5,158.00		4.80	1,023.53		39.75		6,226.08	15.00	6,211.08
	Plumas.....	9,354.23	558.87	419.47	6,945.75	404.60	190.50		17,873.42	77.10	17,796.32
	Santa Barbara.....	244.00			6,045.20		958.07		7,247.27	8.00	7,239.27
	Sequoia.....	5,273.13	125.69	2,061.61	15,327.78	299.00	1,797.42		24,884.63	101.83	24,782.80
	Shasta.....	5,903.16		1,045.36	2,607.98	41.85	27.75		9,626.10	9.67	9,616.43
	Sierra.....	19,149.89	4,646.25		4,089.55		208.15		28,093.84	152.00	27,941.84
	Siskiyou <sup>1</sup> .....	35.32		1.05	15.00	.58	.26		52.21	1.69	50.52
	Stanislaus.....	19,835.84	1,324.63	616.20	5,112.40	11.20	937.63		27,837.90	149.16	27,688.74
	Tahoe <sup>1</sup> .....	23,874.26	1,079.84	6,210.17	8,493.20		2,845.73		42,503.20	234.02	42,269.18
	Trinity.....	1,470.29			3,480.02		170.60		5,120.91		5,120.91
	Total for California.....	106,547.93	9,128.66	13,211.43	93,481.67	919.61	21,691.88	193.50	245,174.68	2,163.06	243,011.62
Colorado.....	Arapaho.....	9,637.02	19.20	310.25	1,448.95		110.00		11,525.42	291.63	11,233.79
	Battlement.....	1,385.78	112.25		7,430.76		105.50		9,034.29	30.50	9,003.79
	Cochetoba.....	4,740.39		76.75	7,883.19		25.75		12,726.08	267.15	12,458.93
	Gunnison.....	5,718.41	18.00	59.56	3,328.01	1.75	30.00		9,155.73	51.34	9,104.39
	Hayden <sup>1</sup> .....	305.60		927.74	2,461.89		6.46		3,701.69	349.55	3,352.14
	Holy Cross.....	14,545.74	50.00		1,731.50		5.00		16,332.24	77.64	16,254.60
	La Sal <sup>1</sup> .....	39.30		.36	537.78		5.70		583.14		583.14
	Leadville.....	8,914.11			6,874.52		156.75		15,945.38	544.10	15,401.28
	Medicine Bow.....	2,302.44	224.82	6.60	1,480.66		70.00		4,084.52	60.00	4,024.52
	Montezuma.....	3,791.85	176.58	35.60	8,522.13		40.50		12,566.66	65.79	12,500.87
	Pike.....	11,236.75	149.41	303.59	4,964.70		721.65		17,376.10	215.97	17,160.13
	Rio Grande.....	2,560.82	52.55		15,049.33		136.70		17,799.40	450.76	17,348.64
	Routt.....	4,850.13	48.60	10.32	7,703.10		2.00	66.78	12,680.93	374.93	12,306.00
	San Isabel.....	1,025.04		179.45	3,035.18		53.37		4,293.04	79.09	4,213.95
	San Juan.....	6,945.49	176.75	305.57	12,893.78	71.00	312.10		20,704.69	3,438.36	17,266.33
	Sopris.....	6,758.46	28.00		3,880.35	25.00	100.50		10,792.31	1,222.41	9,569.90
	Uncompahgre.....	5,870.66		18.64	10,941.54	5.00	20.00		16,855.84	490.05	16,365.79
	White River.....	6,624.26	14.71		7,016.25	53.95	51.50		13,760.67	684.10	13,076.57
	Total Colorado.....	97,252.25	1,070.87	2,234.43	107,183.62	156.70	1,953.48	66.78	209,918.13	8,693.37	201,224.76
Florida.....	Choctawhatchee.....	5.00		529.77	240.93		2,075.25		2,850.95	25.42	2,825.53
Idaho.....	Beaverhead <sup>1</sup> .....	1,161.92		14.90	2,584.06		9.03		3,769.91	6.35	3,763.56
	Boise.....	1,719.85			10,168.15	50.00	63.42	70.00	12,071.42	75.00	11,996.42
	Cache <sup>1</sup> .....	1,064.11		10.90	4,879.34	25.39	12.28		5,992.02	189.76	5,802.26
	Caribou <sup>1</sup> .....	800.68		8.91	19,870.94	79.17	35.23		20,794.93		20,794.93
	Challis.....	1,741.80	100.00		4,477.60	75.00	35.80		6,430.20		6,430.20
	Clearwater.....	11.50			571.15		15.00		597.65		597.65
	Cœur d'Alene.....	39,480.23	10,000.00	31.72	564.67		13,599.54		63,676.16	993.08	62,683.08
	Idaho.....	7.00			8,094.85	100.00	12.50		8,214.35	92.50	8,121.85
	Kaniksú <sup>1</sup> .....	18,689.74	8,785.61	1.72			143.32		27,620.39		27,620.39
	Lemhi.....	1,443.47			5,652.40	72.00	32.80		7,200.67	227.50	6,973.17
	Minidoka <sup>1</sup> .....	1,574.79			8,921.37	23.11	17.71		10,536.98	268.70	10,268.28
	Nez Perce.....	580.13			3,485.50		316.77		4,382.40	97.17	4,285.23
	Payette.....	152.67			6,957.60	37.50	21.00		7,168.77	35.15	7,133.62
	Pend Oreille.....	3,328.00			424.90		7.00		3,794.55	43.65	3,750.90
	Pocatello <sup>1</sup> .....	324.01		32.20	5,130.15	88.17	211.94		5,786.47	.77	5,785.70
	Salmon.....	16,864.77			2,166.60		11.60		19,042.97	478.25	18,564.72
	Sawtooth.....	2,838.61			21,283.67	75.00	63.65		24,260.93	19.75	24,241.18
	Targhee <sup>1</sup> .....	9,152.43	48.93	158.98	12,329.40	226.33	164.52		22,080.59	400.00	21,680.59
	Weiser.....	5,916.24			7,406.49	36.50	102.50		13,879.73	75.26	13,804.47
	Total Idaho.....	106,851.95	19,352.54	293.98	124,968.84	888.17	14,875.61	70.00	267,301.09	3,002.89	264,298.20
Kansas.....	Kansas.....				4,019.90				4,019.90	1.20	4,018.70
Minnesota.....	Minnesota.....						264.50		264.50		264.50
	Superior.....	1,550.00					15.00		1,565.00		1,565.00
	Total Minnesota.....	1,550.00					279.50		1,829.50		1,829.50
Montana.....	Absaroka.....	1,469.38			7,240.05	2.46	182.10		8,893.99	121.21	8,772.78
	Beartooth.....	5,491.13	12.68	222.05	3,019.45		112.45		8,857.76	1,241.92	7,615.84
	Beaverhead <sup>1</sup> .....	5,756.05		73.84	12,801.19		44.71		18,675.79	31.49	18,644.30
	Bitterroot.....	75,120.84	57.45	14.15	1,771.78	19.20	209.80		77,193.22	38.55	77,154.67
	Blackfeet.....	3,432.18			81.65		1,300.45		4,814.28	774.94	4,039.34
	Cabinet.....	1,023.57	171.64	284.54	66.60		32.00		1,578.35	70.33	1,508.02
	Custer.....	1,085.67			10,371.42	863.04	512.95		12,833.08		12,833.08
	Deerlodge.....	48,166.12	415.89	87.23	4,578.35	67.94	957.52		54,273.05	1,296.93	52,976.12
	Flathead.....	979.45			10.45		93.00		1,082.90		1,082.90
	Gallatin.....	1,889.17		930.84	4,527.53		126.60		7,474.14	595.80	6,878.34
	Helena.....	4,227.00	24.43	232.34	10,339.73		1,475.19		16,298.69	314.35	15,984.34
	Jefferson.....	5,116.10	6.00	228.87	8,237.54		394.50		13,983.01	606.13	13,376.88
	Kootenai.....	26,876.56			31.20		16.00		26,923.76	595.40	26,328.36
	Lewis and Clark.....	586.88			1,645.85		43.65		2,276.38	11.00	2,265.38
	Lolo.....	2,747.10	7,750.00	1,264.60	31.60		339.50		12,132.80	3,309.60	8,823.20
	Madison.....	1,795.97	2,002.77	35.00	11,024.90	10.00	425.73		15,294.37	50.40	15,243.97
	Missoula.....	51,447.44	12.00	28.55	3,393.00		197.60		55,078.59	125.00	54,953.59
	Sioux <sup>1</sup> .....	3,550.51			1,878.29	6.98	804.54		6,240.32	7.91	6,232.41
	Total Montana.....	240,761.12	10,452.86	3,402.01	81,050.58	969.62	7,268.29		343,904.48	9,190.96	334,713.52
Nebraska.....	Nebraska.....	81.37			11,191.60		20.00		11,292.97	11.95	11,281.02

<sup>1</sup> Partly in another State. Receipts prorated according to area.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

## NATIONAL FOREST RECEIPTS—Continued.

State.	Name of national forest.	Timber sales.	Timber settlement.	Timber trespass.	Grazing.	Grazing trespass.	Special uses.	Fire trespass.	Gross receipts.	Refunds.	Net receipts.
Nevada.....	Humboldt.....	\$2,285.09		\$60.00	\$33,678.90	\$1,545.00	\$611.93		\$38,180.92	\$211.25	\$37,969.67
	Inyo <sup>1</sup> .....	117.37	\$40.40		164.73		29.31		351.81	8.10	343.71
	Moapa.....				540.00				540.00		540.00
	Mono <sup>1</sup> .....	2,618.30	39.68	1,420.75	2,673.52	59.52	260.22		7,071.99	29.13	7,042.86
	Nevada.....	3,490.39			5,881.22		35.40		9,407.01	384.44	9,022.57
	Tahoe.....	755.21	34.16	196.45	268.66		90.02		1,344.56	7.40	1,337.10
	Toiyabe.....	3,232.46			6,330.60		135.30		9,698.36	696.93	9,001.43
	Total Nevada.....	12,498.82	114.24	1,677.20	49,537.63	1,604.52	1,162.18		66,594.59	1,337.25	65,257.34
New Mexico....	Alamo.....	289.60		197.46	8,041.15	39.66	157.95		8,725.82	87.70	8,638.12
	Carson.....	1,444.42			16,702.20	52.50	40.40		18,239.52	56.95	18,182.57
	Chiricahua <sup>1</sup> .....	374.28		1.47	1,262.63		4.41		1,642.79		1,642.79
	Datil.....	6,831.80			25,200.28	175.64	48.00		32,255.72	132.50	32,123.22
	Gila.....	16,905.28		14.35	15,699.40	310.00	60.15		32,989.18	683.20	32,305.98
	Jemez.....	901.25		62.32	6,941.41	30.86	60.25	\$31.50	8,027.59	154.71	7,872.88
	Lincoln.....	311.70	7.90	75.52	4,631.71	16.95	149.25		5,193.03	31.52	5,161.51
	Manzano.....	257.02		19.50	2,545.74	12.00	13.50		2,847.76	103.49	2,744.27
	Pecos.....	2,346.59		84.44	2,081.50	72.62	88.80		4,673.95	681.97	3,991.98
	Zuni <sup>1</sup> .....	60.81			1,344.27	55.70	8.43		1,469.21	14.39	1,454.82
	Total New Mexico..	29,722.75	7.90	455.06	84,450.29	765.93	631.14	31.50	116,064.57	1,946.43	114,118.14
North Dakota..	Dakota.....				175.00		80.80		255.80	1.25	254.55
Oklahoma.....	Wichita.....	85.20		1.00	2,413.20		5.00		2,504.40		2,504.40
Oregon.....	Cascade.....	816.90	6,544.25	21.95	3,751.85		170.50		11,305.45	588.95	10,716.50
	Crater <sup>1</sup> .....	23,129.32	343.00	11.85	1,144.73	21.80	142.53		24,793.23	4.74	24,788.49
	Deschutes.....	709.92		5.25	11,394.66	25.00	23.44		12,158.27	5.00	12,153.27
	Fremont.....	4,180.83			14,043.81		2.00		18,226.64	198.50	18,028.14
	Malheur.....	2,315.70		830.00	12,850.70		118.20		16,114.60	77.05	16,037.55
	Oregon.....	6,992.00	3,521.75		4,239.00		184.44		14,937.19	3,096.00	11,841.19
	Siskiyou <sup>1</sup> .....	1,181.18		35.01	501.81	19.42	8.74		1,746.16	56.73	1,689.43
	Siuslaw.....	81.00			127.25				208.25		208.25
	Umatilla.....				6,497.15		19.20		6,516.35		6,516.35
	Umpqua.....	5,000.00			1,332.70		2.00		6,334.70		6,334.70
	Wallowa.....	1,754.10		5.60	25,044.64	200.00	136.01		27,140.35	129.80	27,010.55
	Wenaha <sup>1</sup> .....	16.74		18.63	6,101.51	26.29	30.43		6,193.60	8.52	6,185.08
	Whitman.....	1,223.60	2,200.00	115.12	13,203.73	225.00	158.75		17,126.20	92.21	17,033.99
	Total Oregon.....	47,401.29	12,609.00	1,043.41	100,233.54	517.51	996.24		162,800.99	4,257.50	158,543.49
South Dakota..	Black Hills.....	28,691.71	211.82	109.30	5,186.82		1,439.92		35,639.57	883.34	34,756.23
	Sioux <sup>1</sup> .....	2,551.90			1,350.01	5.02	578.26		4,485.19	5.69	4,479.50
	Total South Dakota.	31,243.61	211.82	109.30	6,536.83	5.02	2,018.18		40,124.76	889.03	39,235.73
Utah.....	Ashley <sup>1</sup> .....	1,586.06			6,558.54	49.76	42.60		8,236.96		8,236.96
	Cache <sup>1</sup> .....	989.34		10.14	4,536.45	23.61	11.42		5,570.96	176.43	5,394.53
	Dixie <sup>1</sup> .....	139.87			1,374.08		12.30		1,526.25		1,526.25
	Fillmore.....	1,381.58			7,755.87				9,137.45	67.00	9,070.45
	Fishlake.....	1,483.50			7,974.52		40.00		9,498.02	95.46	9,402.56
	La Sal <sup>1</sup> .....	592.32		5.39	8,105.11		85.96		8,788.78		8,788.78
	Manti.....	4,873.24		480.98	21,008.93	184.40	54.10		26,601.65	189.03	26,412.62
	Minidoka <sup>1</sup> .....	292.47			1,656.87	4.29	3.29		1,956.92	49.90	1,907.02
	Nebo.....	38.00			4,544.65	50.00	44.80		4,677.45		4,677.45
	Pocatello <sup>1</sup> .....	12.22		1.21	193.53	3.33	7.99		218.28	.03	218.25
	Powell.....	677.50			7,618.80	54.00	56.50		8,406.80		8,406.80
	Sevier.....	1,315.40			11,575.10	80.00	74.55		13,045.05		13,045.05
	Uinta.....	2,604.66			27,872.08	376.00	16.50		30,869.24	570.74	30,298.50
	Wasatch.....	382.33	19.50		3,456.21	141.95	240.25		4,240.24	3.50	4,236.74
	Total Utah.....	16,368.49	19.50	497.72	114,230.74	967.34	690.26		132,774.05	1,152.09	131,621.96
Washington....	Chelan.....	719.00		590.00	3,044.65	65.00	92.25		4,510.90	986.56	3,524.34
	Columbia.....	10,000.00			1,622.50		280.00		11,902.50		11,902.50
	Colville.....	456.80		34.95	753.20		25.50	21.84	1,292.29	12.85	1,279.44
	Kaniksu <sup>1</sup> .....	13,911.33	6,539.39	1.28			106.68		20,558.68		20,558.68
	Olympic.....	8,698.66			12.75		233.00		8,944.41		8,944.41
	Rainier.....	5,003.90	600.00		4,003.80	378.00	495.50		10,481.20	500.00	9,981.20
	Snoqualmie.....	11,750.00	309.54	251.75			86.00		12,397.29	500.00	11,897.29
	Washington.....	14,192.05	25.00	6.20	3.00		463.25		14,690.20	602.32	14,087.88
	Wenaha <sup>1</sup> .....	10.76		11.99	3,924.36	16.91	19.57		3,983.59	5.48	3,978.11
	Wenatchee.....	1,372.38	771.92	67.00	5,989.58		133.50	250.46	8,584.84	51.12	8,533.72
	Total Washington...	66,115.58	8,245.85	963.17	19,353.84	459.91	1,935.25	272.30	97,345.90	2,658.33	94,687.57
Wyoming.....	Ashley <sup>1</sup> .....	7.70			31.81	.24	.20		39.95		39.95
	Bighorn.....	32,268.05	131.00		14,163.98	210.00	155.39		46,928.42	407.25	46,521.17
	Bonneville.....	1,108.34			7,657.92	25.00	29.40		8,820.66	3,934.21	4,886.45
	Caribou <sup>1</sup> .....	8.38		.09	208.06	.83	.37		217.73		217.73
	Cheyenne.....	25,357.89	5,972.32	82.47	5,962.45	37.50	23.00		37,435.63	149.67	37,285.96
	Hayden <sup>1</sup> .....	1,349.44		4,096.53	10,870.76		28.54		16,345.27	1,543.50	14,801.77
	Shoshone.....	244.00		44.73	7,395.85		236.63		7,921.21	296.05	7,625.16
	Sundance.....	1,293.14		282.15	918.50	4.05	18.50		2,516.34		2,516.34
	Targhee*.....	3,136.87	16.77	54.49	4,225.73	77.57	56.38		7,567.81	137.10	7,430.71
	Teton.....	350.00			901.60		64.00		1,315.60		1,315.60
	Wyoming.....	-2,260.19		33.87	13,783.45	181.70	6.00		16,265.21	87.90	16,177.31
	Total Wyoming.....	67,384.00	6,120.09	4,594.33	66,120.11	536.89	618.41		145,373.83	6,555.68	138,818.15
Alaska.....	Chugach.....	7,079.33		482.27			142.50		7,704.10	31.25	7,672.85
	Tongass.....	8,209.19		710.31			154.68		9,074.18	345.30	8,728.88
	Total Alaska.....	15,288.52		1,192.58			297.18		16,778.28	376.55	16,401.73

<sup>1</sup> Partly in another State. Receipts prorated according to area.

Classified and detailed reports of all receipts by the Forest Service for the fiscal year 1910 and classified and detailed estimates of every subject of expenditure intended for this service for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stat., p. 1270); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended during the current fiscal year ending June 30, 1911—Continued.

## Forest Service—Continued.

## RECAPITULATION OF RECEIPTS.

State.	Timber sales.	Timber settlement.	Timber trespass.	Grazing.	Grazing trespass.	Special uses.	Fire trespass.	Gross receipts.	Refunds.	Net receipts.
Arizona.....	\$93,698.92	\$228.83	\$993.24	\$113,660.51	\$161.80	\$2,797.78	-----	\$211,541.08	\$6,623.53	\$204,917.55
Arkansas.....	7,233.69	-----	3,942.84	107.53	-----	414.07	-----	11,698.13	80.37	11,617.76
California.....	106,547.93	9,128.66	13,211.43	93,481.67	919.61	21,691.88	\$193.50	245,174.68	2,163.06	243,011.62
Colorado.....	97,252.25	1,070.87	2,234.43	107,183.62	156.70	1,953.48	66.78	209,918.13	8,693.37	201,224.76
Florida.....	5.00	-----	529.77	240.93	-----	2,075.25	-----	2,850.95	25.42	2,825.53
Idaho.....	106,851.95	19,352.54	293.98	124,968.84	888.17	14,875.61	70.00	267,301.09	3,002.89	264,298.20
Kansas.....	-----	-----	-----	4,019.90	-----	-----	-----	4,019.90	1.20	4,018.70
Minnesota.....	1,550.00	-----	-----	-----	-----	279.50	-----	1,829.50	-----	1,829.50
Montana.....	240,761.12	10,452.86	3,402.01	81,050.58	969.62	7,268.29	-----	343,904.48	9,190.96	334,713.52
Nebraska.....	81.37	-----	11,191.60	-----	-----	20.00	-----	11,292.97	11.95	11,281.02
Nevada.....	12,498.82	114.24	1,677.20	49,537.63	1,604.52	1,162.18	-----	66,594.59	1,337.25	65,257.34
New Mexico.....	29,722.75	7.90	455.06	84,450.29	765.93	631.14	31.50	116,064.57	1,946.43	114,118.14
North Dakota.....	-----	-----	175.00	-----	-----	80.80	-----	255.80	1.25	254.55
Oklahoma.....	85.20	-----	2,413.20	-----	-----	5.00	-----	2,504.40	-----	2,504.40
Oregon.....	47,401.29	12,609.00	1,043.41	100,233.54	517.51	996.24	-----	162,800.99	4,257.50	158,543.49
South Dakota.....	31,243.61	211.82	109.30	6,536.83	5.02	2,018.18	-----	40,124.76	889.03	39,235.73
Utah.....	16,368.49	19.50	497.72	114,230.74	967.34	690.26	-----	132,774.05	1,152.09	131,621.96
Washington.....	66,115.58	8,245.85	963.17	19,353.84	459.91	1,935.25	272.30	97,345.90	2,658.33	94,687.57
Wyoming.....	67,384.00	6,120.09	4,594.33	66,120.11	536.89	618.41	-----	145,373.83	6,555.68	138,818.15
Alaska.....	15,288.52	-----	1,192.58	-----	-----	297.18	-----	16,778.28	376.55	16,401.73
<b>Total receipts from forest resources.....</b>	<b>940,090.49</b>	<b>67,562.16</b>	<b>35,141.47</b>	<b>978,956.36</b>	<b>7,953.02</b>	<b>59,810.50</b>	<b>634.08</b>	<b>2,090,148.08</b>	<b>48,966.86</b>	<b>2,041,181.22</b>
Refunds of excess payments.....	27,938.33	3,507.51	138.98	16,932.97	5.00	444.07	-----	48,966.86	-----	-----
<b>Net total.....</b>	<b>912,152.16</b>	<b>64,054.65</b>	<b>35,002.49</b>	<b>962,023.39</b>	<b>7,948.02</b>	<b>59,366.43</b>	<b>634.08</b>	<b>2,041,181.22</b>	-----	-----

There were also the following miscellaneous receipts:

(1) From the sale of condemned Government property.....	\$1,730.13
(2) On account of lost Government property.....	1,611.59
(3) Telephone tolls.....	833.53
(4) From sale of timber on lands formerly a part of the Uinta Indian Reservation, which under the law (33 Stat. 1070) is to be paid to the Indians.....	2,459.87
(5) From contributors on account of cooperative work.....	28,674.35

Total miscellaneous..... 35,309.47

Received from national forest resources, as above detailed..... 2,090,148.08

Total..... 2,129,457.55

The receipts from national forest resources for 1911 are estimated at..... 2,400,000.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911.

## BUREAU OF CHEMISTRY.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Chemistry, 1910, \$75,560.</i>	<i>Salaries, Bureau of Chemistry, 1911, \$79,360.</i>	<i>Salaries, Bureau of Chemistry, 1912, \$242,190.</i>
Wiley, H. W..... Chief of bureau, at \$5,000.....	1 chemist, who shall be chief of bureau.....	1 chemist, who shall be chief of bureau.....
Linton, F. B..... Chief clerk, at \$1,800.....	1 chief clerk.....	1 chief clerk (increase of \$200 submitted).....
Coleman, Jay G..... Clerk, class 4.....	3 clerks, class 4.....	5 clerks, class 4 (increase of 2 submitted, 1 by transfer from lump fund for general expenses, food and drugs act, salaries in Washington, and one new place).....
Pierce, A. L..... Clerk, class 4.....	5 clerks, class 3.....	6 clerks, class 3 (increase of 1 submitted).....
Shibley, J. G..... Clerk, class 3.....	8 clerks, class 2.....	1 clerk (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington).....
Cabell, Syme T..... Clerk, class 3.....	1 property clerk.....	12 clerks, class 2 (increase of 4 submitted, 3 by transfer from lump fund for general expenses, 1 from laboratory salaries and rent, 1 from food and drugs act, salaries out of Washington, and 1 from food and drugs act, salaries in Washington, and 1 new place).....
Eckman, Ethel..... Clerk, class 3.....	1 clerk.....	18 clerks, class 1 (increase of 3 submitted by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington, and 5 from general expenses, food and drugs act, salaries in Washington, and decrease of 1 by transfer to Division of Accounts and Disbursements, making a net increase of 7 submitted).....
Olson, H. E..... Clerk, class 3.....	11 clerks, class 1.....	13 clerks, at \$1,020 each (by transfer from lump fund for general expenses, 11 from food and drugs act, salaries out of Washington, and 2 from food and drugs act, salaries in Washington).....
Pearce, E. W..... Clerk, class 3.....	9 clerks, at \$1,000 each.....	-----
Parkinson, N. A..... Clerk, class 3.....	1 assistant property custodian.....	-----
Walters, H. H..... Clerk, class 3.....	11 clerks, at \$900 each.....	-----
Dallas, M. L..... Clerk, class 2.....	2 messengers, at \$840 each.....	-----
Emmons, Marion T..... Clerk, class 2.....	1 skilled laborer.....	-----
Wood, Myrtle J..... Clerk, class 2.....	2 skilled laborers, at \$720 each.....	-----
Grayson, M. C..... Clerk, class 2.....	1 skilled laborer.....	-----
Lucas, Frederick C..... Clerk, class 2.....	4 messengers or laborers, at \$600 each.....	-----
Moore, Mary D..... Clerk, class 2.....	6 messengers or laborers, at \$480 each.....	-----
Olson, H. E..... Clerk, class 2.....	2 messengers or laborers, at \$420 each.....	-----
Proctor, Mary F..... Clerk, class 2.....	1 messenger or laborer.....	-----
Shipe, L. F..... Clerk, class 2.....	4 charwomen, at \$240 each.....	-----
Nordeman, Agnes M..... Property clerk, at \$1,600.....	-----	-----
La Grange, E. R..... Clerk, at \$1,300.....	<b>Total amount of above appropriation (an increase over 1910 of \$3,800).....</b>	-----
Proctor, Mary F..... Clerk, at \$1,300.....	<b>79,360.00</b>	-----
Wood, Myrtle J..... Clerk, class 1.....	-----	-----
Anderson, M. F..... Clerk, class 1.....	-----	-----
Postle, S. A..... Clerk, class 1.....	-----	-----
Davis, Carrie M..... Clerk, class 1.....	-----	-----
La Grange, E. R..... Clerk, class 1.....	-----	-----
Eckman, L. L..... Clerk, class 1.....	-----	-----
Moore, Mrs. U. S..... Clerk, class 1.....	-----	-----
Hartman, M. E..... Clerk, class 1.....	-----	-----
Proctor, Mary F..... Clerk, class 1.....	-----	-----
Hiatt, Mabel B..... Clerk, class 1.....	-----	-----
Lambert, May A..... Clerk, class 1.....	-----	-----
Phillips, Maud..... Clerk, class 1.....	-----	-----
Schieber, C. C..... Clerk, class 1.....	-----	-----
Skinner, Laura A..... Clerk, class 1.....	-----	-----
Walter, Wallace W..... Clerk, class 1.....	-----	-----
Anderson, M. F..... Clerk, at \$1,000.....	-----	-----
Durham, C. J..... Clerk, at \$1,000.....	-----	-----
Clement, B. Dorothy..... Clerk, at \$1,000.....	-----	-----
Davis, Carrie M..... Clerk, at \$1,000.....	-----	-----

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Chemistry, 1910, \$75,560—Continued.</i>	<i>Salaries, Bureau of Chemistry, 1911, \$79,360—Con.</i>	<i>Salaries, Bureau of Chemistry, 1912, \$242,190—Con.</i>
Cohencious, S. F. Clerk, at \$1,000.....	\$1,000.00	11 clerks, at \$1,000 each (increase of 2 submitted by transfer from lump fund for general expenses, 1 from food and drugs act, salaries out of Washington, and 1 from food and drugs act, salaries in Washington). \$11,000.00
Connell, Lydia Clerk, at \$1,000.....	708.33	18 clerks, at \$900 each (increase of 7 submitted by transfer from lump fund for general expenses, 6 from food and drugs act, salaries out of Washington, and 1 from food and drugs act, salaries in Washington). 16,200.00
Hartman, M. E. Clerk, at \$1,000.....	291.67	1 clerk (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington)..... 720.00
Eckman, L. L. Clerk, at \$1,000.....	791.67	1 property clerk..... 1,600.00
Potwin, Jessie Clerk, at \$1,000.....	208.33	1 assistant property custodian..... 900.00
Kemp, Walter D. Clerk, at \$1,000.....	1,000.00	1 chief food and drug inspector (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington). 2,760.00
Phillips, Cecelia D. Clerk, at \$1,000.....	1,000.00	1 food and drug inspector (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington). 2,250.00
Warder, Nannie Clerk, at \$1,000.....	1,000.00	6 food and drug inspectors, at \$2,000 each (by transfer from lump fund for general expenses, 4 from food and drugs act, salaries in Washington)..... 12,000.00
Whitall, Mary L. Clerk, at \$1,000.....	1,000.00	13 food and drug inspectors, at \$1,800 each (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington). 23,400.00
Guasp, Ignacio Assistant property custodian, at \$900.....	890.00	1 food and drug inspector (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington). 1,620.00
Aldrich, Jessie M. Clerk, at \$900.....	347.50	11 food and drug inspectors, at \$1,600 each (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington). 17,600.00
Campbell, Bertha I. Clerk, at \$900.....	525.00	8 food and drug inspectors, at \$1,400 each (by transfer from lump fund for general expenses, 7 from food and drugs act, salaries out of Washington, and 1 from food and drugs act, salaries in Washington). 11,200.00
Biyyell, Lou Clerk, at \$900.....	228.75	1 laboratory helper (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington). 1,020.00
Connell, Lydia Clerk, at \$900.....	262.50	4 laboratory helpers, at \$1,000 each (by transfer from lump fund for general expenses, 3 from food and drugs act, salaries in Washington, and 1 from food and drugs act, salaries out of Washington). 4,000.00
Farrell, Helen I. Clerk, at \$900.....	397.50	4 laboratory helpers, at \$960 each (by transfer from lump fund for general expenses, 3 from food and drugs act, salaries in Washington, and 1 from laboratory, salaries and rent). 3,840.00
Brown, Harry F. Clerk, at \$900.....	245.00	2 laboratory helpers, at \$780 each (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington). 1,560.00
Elliot, Esther S. Clerk, at \$900.....	598.75	17 laboratory helpers, at \$720 each (by transfer from lump fund for general expenses, 10 from food and drugs act, salaries out of Washington, 2 from food and drugs act, salaries in Washington, 4 from laboratory, salaries and rent, and 1 from laboratory American Food Products). 12,240.00
Clement, B. Dorothy Clerk, at \$900.....	765.00	2 laboratory helpers, at \$660 each (by transfer from lump fund for general expenses, 1 from food and drugs act, salaries out of Washington, and 1 from food and drugs act, salaries in Washington). 1,320.00
Selecman, C. M. R. Clerk, at \$900.....	135.00	
Dodge, Ruby M. Clerk, at \$900.....	187.50	
Durham, C. J. Clerk, at \$900.....	712.50	
Markey, Katherine T. Clerk, at \$900.....	287.50	
Olive, Ruby G. Clerk, at \$900.....	135.00	
Tucker, Ethel M. Clerk, at \$900.....	247.50	
Nordeman, Hazel Clerk, at \$900.....	562.50	
Sommers, Goldine E. T. Clerk, at \$900.....	300.00	
O'Leary, Katherine M. Clerk, at \$900.....	900.00	
Potwin, Jessie Clerk, at \$900.....	712.50	
Samuels, Walter M. Clerk, at \$900.....	187.50	
Powell, Mareta Clerk, at \$900.....	375.00	
Willis, Anna W. Clerk, at \$900.....	512.50	
Rogers, Jas. H. Clerk, at \$900.....	880.00	
Riggles, Thos. Engineer, at \$1,200.....	1,200.00	
Gantt, J. E. M. Messenger, at \$840.....	840.00	
Johnson, M. A. Messenger, at \$840.....	840.00	
Chick, Thomas Skilled mechanic, at \$900.....	900.00	
Cohen, J. Skilled laborer, at \$720.....	720.00	
Dugan, M. A. Skilled laborer, at \$720.....	720.00	
Brown, Horace Skilled laborer, at \$600.....	600.00	
Brooks, Archie E. Fireman, at \$600.....	110.00	
Kirksey, Wm. Fireman, at \$600.....	468.33	
Gerard, Missouri Messenger or laborer, at \$600.....	600.00	
Lawson, W. H. Messenger or laborer, at \$600.....	600.00	
Sherfy, R. E. Messenger or laborer, at \$600.....	600.00	
Thomas, Garfield Messenger or laborer, at \$600.....	600.00	
Brooks, M. A. Messenger or laborer, at \$480.....	480.00	
George, S. A. Messenger or laborer, at \$480.....	84.00	
Whalen, Annie E. Messenger or laborer, at \$480.....	392.00	
Ryon, Lillie Messenger or laborer, at \$480.....	480.00	
Doolan, Elmer Messenger of laborer, at \$420.....	175.00	
Glidden, D. W. Messenger of laborer, at \$420.....	106.17	
Jones, R. S. Messenger or laborer, at \$420.....	409.50	
Butler, Rosa Charwoman, at \$240.....	240.00	
Orr, Sarah J. Charwoman, at \$240.....	240.00	
Welch, Nellie Charwoman, at \$240.....	240.00	
Williams, Maggie Charwoman, at \$240.....	240.00	
Total.....	74,798.89	
Unexpended balance.....	761.11	
Total amount of above appropriation.....	75,560.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Chemistry, 1910, \$75,560—Continued.</i>	<i>Salaries, Bureau of Chemistry, 1911, \$79,360—Con.</i>	<i>Salaries, Bureau of Chemistry, 1912, \$242,190—Con.</i>
		19 laboratory helpers, at \$300 each (by transfer from lump fund for general expenses, 9 from food and drugs act, salaries out of Washington, and 10 from food and drugs act, salaries in Washington)..... \$11,400.00
		1 laboratory assistant (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 1,200.00
		1 toolmaker (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 1,200.00
		1 janitor (by transfer from lump fund for general expenses, food and drugs act, salaries out of Washington)..... 1,020.00
		1 student assistant (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 300.00
		2 messengers, at \$840 each..... 1,680.00
		1 skilled laborer..... 900.00
		2 skilled laborers, at \$720 each..... 1,440.00
		1 skilled laborer..... 600.00
		4 messengers or laborers, at \$600 each..... 2,400.00
		2 messenger boys or laborers, at \$540 each (by transfer from lump fund for general expenses, food and drugs act, salaries in Washington, and change of title)..... 1,080.00
		8 messenger boys or laborers, at \$480 each (change of title and increase of two by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 3,840.00
		3 messenger boys or laborers, at \$420 each (change of title and increase of one by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 1,260.00
		1 messenger or laborer..... 360.00
		6 charwomen, at \$240 each (increase of two submitted by transfer from lump fund for general expenses, food and drugs act, salaries in Washington)..... 1,440.00
		<b>Total amount estimated (an apparent increase over 1911 of \$162,830)..... 242,190.00</b>
		NOTE 1.—There is an apparent increase in the above appropriation of \$162,830. Of this sum \$159,030 covers the transfer of 145 employees from the lump-fund appropriations, which appropriations have been reduced accordingly. One clerk, class 4, one clerk, class 3, and one clerk, class 2; in all, \$4,800 have been added, and an increase of \$200 is submitted for the promotion of the chief clerk of the bureau. One clerk, class 1, has been transferred to Division of Accounts and Disbursements. The changes in detail are as follows:
		Transfers from lump fund for general expenses:
		7 employees from laboratory, salaries and rent..... 6,080.00
		1 employee from laboratory, American food products..... 720.00
		49 employees from food and drugs act, salaries in Washington..... 45,180.00
		88 employees from food and drugs act, salaries out of Washington..... 107,050.00
		New places:
		1 clerk, class 4..... 1,800.00
		1 clerk, class 3..... 1,600.00
		1 clerk, class 2..... 1,400.00
		Promotions:
		1 chief clerk..... 200.00
		164,030.00
		Transfer to Division of Accounts and Disbursements:
		1 clerk, class 1..... 1,200.00
		162,830.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Chemistry, 1910, \$75,560—Continued.</i>	<i>Salaries, Bureau of Chemistry, 1911, \$79,360—Con.</i>	<i>Salaries, Bureau of Chemistry, 1912, \$242,190—Con.</i>
The above force performed the following work:	The above force is performing the following work:	The above force will perform the following work:
Administrative and executive:	Administrative and executive:	Administrative and executive:
1 chief of bureau..... \$5,000.00	1 chief of bureau..... \$5,000.00	1 chief of bureau..... \$5,000.00
1 chief clerk..... 1,800.00	1 chief clerk..... 1,800.00	1 chief clerk..... 2,000.00
\$6,800.00	\$6,800.00	\$7,000.00
Supplies and accounts:	Supplies and accounts:	Supplies and accounts:
1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
1 clerk, class 2..... 1,400.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
2 clerks, class 1..... 2,400.00	1 clerk..... 1,300.00	1 clerk, class 2..... 1,400.00
1 assistant property custodian..... 900.00	1 clerk, class 1..... 1,200.00	1 clerk..... 1,300.00
1 clerk..... 900.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
7,400.00	6,900.00	7,100.00
Interstate and import records:	Interstate records:	Interstate records:
1 clerk, class 3..... 1,600.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00	1 clerk..... 1,440.00
3 clerks, class 1..... 3,600.00	4 clerks, class 1..... 4,800.00	1 clerk, class 2..... 1,400.00
1 clerk..... 900.00	1 clerk..... 1,000.00	5 clerks, class 1..... 6,000.00
7,500.00	3 clerks, at \$900 each..... 2,700.00	2 clerks, at \$1,000 each..... 2,000.00
	11,700.00	3,600.00
Import records:	Import records:	Import records:
(Included in 1910 under Import and Interstate records.)	1 clerk, class 3..... 1,600.00	1 clerk, class 4..... 1,800.00
	2 clerks, class 1..... 2,400.00	1 clerk, class 3..... 1,600.00
	1 clerk..... 1,000.00	2 clerks, class 1..... 2,400.00
	5,000.00	1 clerk..... 1,000.00
		6,800.00
Library:	Library:	Library:
1 clerk..... 1,000.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
Editorial:	Editorial:	Editorial:
1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
		1 clerk, class 1..... 1,200.00
		3,000.00
Guaranty records:	Guaranty records:	Guaranty records:
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
1 clerk, class 1..... 1,200.00	1 clerk..... 900.00	1 clerk..... 900.00
2,800.00	2,500.00	2,500.00
Inspection records:	Inspection records:	Inspection records:
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00	1 clerk, class 2..... 1,400.00
1 clerk..... 1,000.00	1 clerk..... 900.00	1 clerk, class 1..... 1,200.00
3 clerks, at \$900 each..... 2,700.00		1 clerk..... 900.00
6,500.00	3,700.00	5,100.00
Filing and indexing correspondence:	Filing and indexing correspondence:	Filing and indexing correspondence:
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
2 clerks, at \$1,000 each..... 2,000.00	2 clerks, at \$1,000 each..... 2,000.00	2 clerks, at \$1,000 each..... 2,000.00
1 clerk..... 900.00	1 clerk..... 900.00	1 clerk..... 900.00
4,500.00	4,500.00	4,500.00
Stenography and miscellaneous records:	Stenography and miscellaneous records:	Stenography and miscellaneous records:
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
5 clerks, class 2..... 7,000.00	7 clerks, class 2..... 9,800.00	1 clerk, class 3..... 1,600.00
1 clerk..... 1,300.00	3 clerks, class 1..... 3,600.00	7 clerks, class 2..... 9,800.00
1 clerk, class 1..... 1,200.00	3 clerks, at \$1,000 each..... 3,000.00	5 clerks, class 1..... 6,000.00
4 clerks, at \$1,000 each..... 4,000.00	6 clerks, at \$900 each..... 5,400.00	3 clerks, at \$1,000 each..... 3,000.00
3 clerks, at \$900 each..... 2,700.00		7 clerks, at \$900 each..... 6,300.00
17,800.00	23,400.00	28,500.00
Records of hearings and pending cases:	Engine and machine room:	Engine and machine room:
1 clerk, class 4..... 1,800.00	This work will be performed by men transferred to the Secretary's roll.	This work will be performed by men transferred to the Secretary's roll.
1 clerk, class 3..... 1,600.00		
1 clerk, class 1..... 1,200.00		
1 clerk..... 1,000.00		
2 clerks, at \$900 each..... 1,800.00		
7,400.00		
Engine and machine room:	Messengers and laborers:	Messengers and laborers:
1 engineer..... 1,200.00	1 skilled laborer..... \$900.00	1 janitor..... \$1,020.00
1 skilled mechanic..... 900.00	2 messengers, at \$840 each..... 1,680.00	1 skilled laborer..... 900.00
1 skilled laborer..... 720.00	2 messengers or laborers, at \$720 each..... 1,440.00	2 messengers, at \$840 each..... 1,680.00
1 skilled laborer..... 600.00	5 messengers or laborers, at \$600 each..... 3,000.00	2 messengers or laborers, at \$720 each..... 1,440.00
1 fireman..... 600.00	6 messengers or laborers, at \$480 each..... 2,880.00	5 messengers or laborers, at \$600 each..... 3,000.00
4,020.00	2 messengers or laborers, at \$420 each..... 840.00	2 messenger boys, at \$540 each..... 1,080.00
Messengers and laborers:	1 messenger or laborer..... 360.00	8 messenger boys, at \$480 each..... 3,840.00
2 messengers, at \$340 each..... 1,680.00	4 charwomen, at \$240 each..... 960.00	3 messenger boys, at \$420 each..... 1,260.00
1 messenger..... 720.00		1 messenger boy..... 360.00
4 messengers, at \$600 each..... 2,400.00		6 charwomen, at \$240 each..... 1,440.00
3 messengers or laborers, at \$480 each..... 1,440.00		
2 messengers or laborers, at \$420 each..... 840.00		
4 charwomen, at \$240 each..... 960.00		
8,040.00	12,060.00	16,020.00
75,560.00	79,360.00	

Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Chemistry, 1910, \$75,560—Continued.</i>	<i>Salaries, Bureau of Chemistry, 1911, \$79,360—Con.</i>	<i>Salaries, Bureau of Chemistry, 1912, \$242,190—Con.</i>
		Food and drug inspectors:
		1 chief food and drug inspector..... \$2,760.00
		1 food and drug inspector..... 2,250.00
		6 food and drug inspectors, at \$2,000 each..... 12,000.00
		13 food and drug inspectors, at \$1,800 each..... 23,400.00
		1 food and drug inspector..... 1,620.00
		11 food and drug inspectors, at \$1,600 each..... 17,600.00
		8 food and drug inspectors, at \$1,400 each..... 11,200.00
		<u>70,830.00</u>
		Branch laboratories:
		1 clerk, class three... 1,600.00
		2 clerks, class two... 2,800.00
		4 clerks, class one... 4,800.00
		13 clerks, at \$1,020 each..... 13,260.00
		1 clerk..... 1,000.00
		5 clerks, at \$900 each. 4,500.00
		1 clerk..... 720.00
		<u>28,680.00</u>
		Laboratory helpers and assistants:
		1 laboratory helper.. 1,020.00
		4 laboratory helpers, at \$1,000 each.... 4,000.00
		4 laboratory helpers, at \$960 each..... 3,840.00
		2 laboratory helpers, at \$900 each..... 1,800.00
		6 laboratory helpers, at \$840 each..... 5,040.00
		2 laboratory helpers, at \$780 each..... 1,560.00
		17 laboratory helpers, at \$720 each..... 12,240.00
		2 laboratory helpers, at \$660 each..... 1,320.00
		19 laboratory helpers, at \$600 each..... 11,400.00
		1 laboratory assistant 1,200.00
		1 student assistant.. 300.00
		1 toolmaker..... 1,200.00
		<u>44,920.00</u>
		<u>242,190.00</u>
<i>"General expenses, Bureau of Chemistry, 1910," (laboratory, \$117,540).</i>	<i>"General expenses, Bureau of Chemistry, 1911" (laboratory, \$114,000).</i>	<i>"General expenses, Bureau of Chemistry, 1912," (laboratory, \$111,480 submitted).</i>
Lump-fund salaries in Washington..... \$50,019.54	Lump-fund salaries in Washington. \$56,750.00	Lump-fund salaries in Washington. \$55,000.00
Lump-fund salaries outside of Washington..... 10,268.67	Lump-fund salaries outside of Washington..... 12,200.00	Lump-fund salaries outside of Washington..... 11,250.00
Stationery..... 2,863.73	Stationery..... 3,000.00	Stationery..... 3,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 13,527.34	Miscellaneous supplies and services, equipment, books, machinery, etc 16,100.00	Miscellaneous supplies and services, equipment, books, machinery, etc 16,000.00
Furniture..... 1,928.84	Furniture..... 2,000.00	Furniture..... 2,000.00
Freight..... 208.34	Freight..... 200.00	Freight..... 200.00
Express..... 147.79	Express..... 150.00	Express..... 150.00
Telephone..... 121.08	Telephone..... 125.00	Telephone..... 125.00
Rent..... 11,093.60	Rent..... 8,950.00	Rent..... 8,950.00
Gas and electricity..... 2,107.89	Gas and electricity..... 1,000.00	Gas and electricity..... 1,000.00
Apparatus, instruments, and laboratory material..... 6,873.17	Apparatus, instruments, and laboratory material..... 9,525.00	Apparatus, instruments, and laboratory material..... 9,725.00
Travel and station and field expenses..... 3,632.82	Travel and station and field expenses. 4,000.00	Travel and station and field expenses. 4,080.00
Total expenditure under above groups to Aug. 31, 1910. 102,792.81		
Repayments to the credit of the appropriation..... 3.00		
Net payments under above groups to Aug. 31, 1910.... 102,789.81		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 2,362.55		
Balance to be turned back in Treasury (estimated)..... 12,387.64		
<b>Total of above appropriation..... 117,540.00</b>	<b>Total of above appropriation (an apparent decrease under 1910 of \$3,540)..... 114,000.00</b>	<b>Total amount estimated (an apparent decrease under 1911 of \$2,520)..... 111,480.00</b>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>"General expenses, Bureau of Chemistry, 1910" (laboratory, \$117,540)—Continued.</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Chemistry. This work fell naturally under the following projects:</p> <p>PROJECTS.</p> <p>(1) Administrative. Office, clerical, and editorial:</p> <p>Salaries..... \$2,070.00 Supplies..... 3,097.78 General expenses..... 1,553.00</p> <p>\$6,720.78</p> <p>(2) Contracts laboratory. Test and examination of contract supplies furnished by contractors to this and other departments of the Government; study of method of testing supplies and the preparation of specifications for contract supplies.</p> <p>Salaries..... \$15,898.44 Traveling expenses..... 127.20 Supplies..... 4,383.22 General expenses..... 1,610.00</p> <p>22,023.86</p> <p>(3) Leather and paper laboratory. Study of the physical and chemical qualities of leather and of the principles of rapid tanning; for study and testing papers, ropes, etc., for various uses, and for the preparation of standard specifications for such items; for investigation of new raw materials for pulp and paper making; for the investigation of the production and industrial application of wood turpentine and the study of the destructive distillation of woods; study of tanning materials with reference to, utilization of such products as grow quickly, or which have hitherto been little used, with a view of supplementing the rapidly decreasing supply; for testing papers, twine, etc., supplied by contractors to this department and the Government Printing Office, Post Office Department, and other departments of the Government, as requested.</p> <p>Salaries..... \$9,647.22 Traveling expenses..... 304.64 Supplies..... 4,421.88 General expenses..... 1,300.00</p> <p>15,673.74</p> <p>(4) Vegetable physiological chemistry. In collaboration with the Bureau of Plant Industry, of this department; study of the improvement of cereals grown in this country; effect of variation of climate on newly introduced varieties of grain; chemical changes in composition of cereals when grown in different localities and at different stages of growth; study of influence of excessive changes in cereals after grinding, when allowed to age; study of methods of analysis; study of the influence of fertilizers; study of barley and malts; study of the chemical and physiological changes taking place in barley during fermentation, and changes in the composition of cereals during storage.</p> <p>Salaries..... \$9,198.32 Traveling expenses..... 457.35 Supplies..... 3,483.73 General expenses..... 1,040.00</p> <p>14,179.40</p>	<p>"General expenses, Bureau of Chemistry, 1911" (laboratory, \$114,000)—Continued.</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Chemistry. This work falls naturally under the following projects:</p> <p>PROJECTS.</p> <p>(1) Administrative. Office, clerical and editorial:</p> <p>Salaries..... \$2,400.00 Supplies..... 3,000.00 General expenses..... 1,200.00</p> <p>\$6,600.00</p> <p>(2) Contracts laboratory. Continuation of work outlined before. The work of testing supplies for other departments has grown in volume and importance, a great variety of supplies being tested, including the examination of supplies furnished the Isthmian Canal Commission and other departments of the Government; study of new methods of analysis and tests; making a study of the inflammability of denatured alcohol, and the methods for the storage of same; examination of linseed oil; service tests of paints and paint materials.</p> <p>Salaries..... \$16,700.00 Traveling expenses..... 300.00 Supplies..... 4,600.00 General expenses..... 1,500.00</p> <p>23,100.00</p> <p>(3) Leather and paper laboratory. Carrying on the work and investigations as previously outlined; testing paper, leather and turpentine for other departments will be continued, with special reference to the qualities that determine value in service; work on the quality of papers and investigations of new paper-making materials, and paper-making processes.</p> <p>Salaries..... \$11,800.00 Traveling expenses..... 300.00 Supplies..... 3,800.00 General expenses..... 1,000.00</p> <p>16,900.00</p> <p>(4) Vegetable physiological chemistry. For continuing the lines of work previously outlined, in collaboration with the various divisions of the Bureau of Plant Industry; study of the influence of climate, soils, etc., on the composition, character and value of farm products, in collaboration with the Bureau of Plant Industry.</p> <p>Salaries..... \$9,700.00 Traveling expenses..... 600.00 Supplies..... 3,400.00 General expenses..... 1,000.00</p> <p>14,700.00</p>	<p>"General expenses, Bureau of Chemistry, 1912" (laboratory, \$111,480 submitted)—Continued.</p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Chemistry. This work will fall naturally under the following projects:</p> <p>PROJECTS.</p> <p>(1) Administrative. Office, clerical, and editorial:</p> <p>Salaries..... \$2,400.00 Supplies..... 3,000.00 General expenses..... 1,200.00</p> <p>\$6,600.00</p> <p>(2) Contracts laboratory. Continuation and extension of work previously outlined; the study of paints and paint materials; work on the testing of rubber; the revision of existing specifications and the preparation of specifications for materials for which there are no satisfactory specifications obtainable, and other work incident to testing contract supplies for this and other departments of the Government.</p> <p>Salaries..... \$16,700.00 Traveling expenses..... 300.00 Supplies..... 4,600.00 General expenses..... 1,500.00</p> <p>23,100.00</p> <p>(3) Leather and paper laboratory. Continuation and extension of work previously outlined; experiments on the quality of paper best adapted to various purposes; investigations looking to the specifications for papers which shall be durable; study of unusual paper-making materials and methods for the utilization of waste from paper making with a view to increasing the availability of raw materials; investigations of the service qualities of leather, with a view to conserving the raw materials, and other work relative to the leather and paper industry; preparation of specifications, etc.</p> <p>Salaries..... \$11,400.00 Traveling expenses..... 300.00 Supplies..... 3,800.00 General expenses..... 1,000.00</p> <p>16,500.00</p> <p>(4) Vegetable physiological chemistry. In collaboration with the Bureau of Plant Industry; continuation and extension of work previously outlined; plant studies during the early periods of growth and study of the influence of environment on the composition of certain products grown under varying conditions, etc.</p> <p>Salaries..... \$9,400.00 Traveling expenses..... 600.00 Supplies..... 3,400.00 General expenses..... 1,000.00</p> <p>14,400.00</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General expenses, Bureau of Chemistry, 1910" (laboratory, \$117,540)—Continued.</i>	<i>"General expenses, Bureau of Chemistry, 1911" (laboratory, \$114,000)—Continued.</i>	<i>"General expenses, Bureau of Chemistry, 1912" (laboratory, \$111,480 submitted)—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(5) Food division. Study of the lemon-oil industry; investigation of the production of peanut oil; of the varieties of the soy bean, as to production of oil therefrom, and the most profitable variety, in collaboration with the Bureau of Plant Industry; examination of samples of foods for the War Department and other departments of the Government; in collaboration with the Bureau of Plant Industry, study of the preparation and preservation of fruit and fruit juices for the market; study of new methods of analysis; study of problems relative to the utilization of by-products of lemon; work on fermentation.	(5) Food division. For carrying on the work previously outlined; studying and preparing new processes for the preservation and preparation of fruits for the market; further studies of the lemon-oil industry, also study of the problems presented by the California by-products work; new methods of analysis; examination of samples of foods for the War Department and other departments of the Government, as requested.	(5) Food division. Continuation and extension of work previously outlined; extension of the studies of the lemon-oil industry; investigations to determine the practicability of utilizing the waste products of the lemon; examination of samples of foods for the War Department and other departments of the Government, as requested; study of new methods of analysis, etc., in collaboration with the Bureau of Plant Industry, the manufacture of citrous by-products from waste fruits; the chemical composition of the soy bean, with special reference to methods for the manufacture and clarification of oils; clarification and preserving of fruit juices, giving attention to the different varieties of fruits, and continuing the investigation of storing at low temperatures, under commercial conditions; the effects of low temperatures on the life process of fruits; the composition of the several varieties of oranges.
Salaries..... \$4,263.72	Salaries..... \$5,100.00	Salaries..... \$5,000.00
Traveling expenses..... 735.06	Traveling expenses.. 800.00	Traveling expenses.. 800.00
Supplies..... 5,392.69	Supplies..... 4,850.00	Supplies..... 4,850.00
General expenses..... 1,802.00	General expenses.... 1,200.00	General expenses.... 1,200.00
\$12,193.47	\$11,950.00	\$11,850.00
(6) Drug division. Testing chemicals supplied furnished this and other departments by contractors; examining drug products for the Post Office Department, in order to prevent fraud, in collaboration with that department; study of new methods of analyses.	(6) Drug division. For carrying on work previously outlined; study of new methods of analysis; examination of contract chemicals for this department.	(6) Drug division. For continuing work previously outlined; study of new methods of analysis; examination of contract chemicals in this department and other departments, as requested, and collaboration with the Post Office Department.
Salaries..... \$1,051.00	Salaries..... \$1,900.00	Salaries..... \$1,500.00
Supplies..... 700.00	Traveling expenses.. 200.00	Traveling expenses.. 200.00
General expenses..... 100.00	Supplies..... 600.00	Supplies..... 600.00
1,851.00	General expenses.... 500.00	General expenses.... 500.00
	3,200.00	2,800.00
(7) Miscellaneous division. Study of insecticides and fungicides and field studies of the effects of lead arsenate on foliage; study of effects of trade wastes on vegetation; study of new methods of analyses; study of the relative feeding values and commercial importance of grains; examination of miscellaneous samples for this bureau and for other departments of the Government, as requested.	(7) Miscellaneous division. For carrying on previous work and investigations, particularly the study of insecticides and fungicides, and the effects of trade wastes on forests, farm crops, and animals and to provide methods for preventing or mitigating such injuries; the study of range foliage crops; the milling and baking quality of cereals and other products; studies of new methods of analysis; the effect of toxic gases on different species of plants; also resistance of certain plants to copper, arsenic, etc., and to make an examination of the method of manufacture and practical value of disinfectants; the study of range forage crops, etc., in collaboration with the Bureau of Plant Industry.	(7) Miscellaneous division. Continuation and extension work previously outlined; examination of water supplies of cities, towns, and public institutions when requested; the study of mineral-water analysis; study of the causes of injury to foliage of fruit trees of lead arsenate, in collaboration with other bureaus of the department; a study of the supposed injury to fruit trees from the accumulation of toxic salts in the soils, due to the use of insecticides. Orchard and laboratory tests of poisonous compounds not at present used as insecticides, with a view to finding some substance which may be used on peach and other tender foliage, and other miscellaneous work along the lines indicated and requested from time to time by other bureaus of this department.
Salaries..... \$2,811.67	Salaries..... \$4,100.00	Salaries..... \$4,000.00
Traveling expenses..... 146.78	Traveling expenses.. 800.00	Traveling expenses.. 800.00
Supplies..... 2,432.98	Supplies..... 2,300.00	Supplies..... 2,300.00
General expenses..... 1,496.00	General expenses.... 1,400.00	General expenses.... 1,400.00
6,887.43	8,600.00	8,500.00
(8) Dairy laboratory. Analysis of dairy products; for Bureau of Animal Industry of this department, for this bureau and for other departments of the Government, as requested; study of composition of market dairy products, and for study of methods of analysis of dairy products.	(8) Dairy laboratory. For work previously outlined; work on analytical methods and other work in collaboration with the Bureau of Animal Industry.	(8) Dairy laboratory. Continuation of work previously outlined; study of new methods.
Salaries..... \$22.50	Salaries..... \$600.00	Salaries..... \$600.00
Supplies..... 500.00	Supplies..... 300.00	Supplies..... 300.00
General expenses..... 536.00	General expenses.... 500.00	General expenses.... 500.00
1,058.50	1,400.00	1,400.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>"General expenses, Bureau of Chemistry, 1910" (laboratory, \$117,540)—Continued.</p> <p>PROJECTS—continued.</p> <p>(9) Sugar laboratory. Study of various raw materials for use in alcohol production; examination of samples in study of effects of environment on sweet Indian corn and field examination to determine actual effect of the environment on sweet Indian corn. The work on sweet Indian corn was completed in the fall of 1909, and in the spring of 1910 a similar investigation was inaugurated to determine the effect of environment on cantaloupes; studying the effects of environment and the process of manufacture upon composition of beet molasses; the environment work referred to being in collaboration with the Bureau of Plant Industry; for study of chemical methods employed in the analysis of sugars and carbohydrates; special attention has been paid to maple sirup and sugar industry, much attention being paid to the collection of the sap and its treatment; studying the effect of these factors on appearance and composition of the finished product.</p> <p>Salaries..... \$2,934.75 Traveling expenses..... 2,274.66 Supplies..... 1,742.85 General expenses..... 600.00</p> <p>\$7,552.26</p> <p>(10) Microchemical laboratory. Microscopical examinations of samples for this and other departments; special attention is being given to histological study of fruits, spices, cereals, and other agricultural products; study of methods of analysis and other microscopical work as requested from time to time by this and other departments of the Government.</p> <p>Salaries..... \$350.00 Supplies..... 400.00 General expenses..... 100.00</p> <p>850.00</p> <p>(11) Bacteriological investigations. For bacteriological examination of samples for other laboratories of this bureau and department, and other departments; study of methods of examination.</p> <p>Salaries..... \$400.00 Supplies..... 200.00 General expenses..... 50.00</p> <p>650.00</p> <p>(12) American food products. For investigating the character of chemical and physical tests which are applied to American food products in foreign countries, and for inspecting the same before shipment when desired by the shippers or owners of these products, intended for countries where chemical and physical tests are required before such products are allowed to be sold therein.</p> <p>Salaries..... \$4,586.67 Supplies..... 382.08</p> <p>4,968.75</p> <p>(13) Enological investigations. Study of cultures of pure yeast in relation to the fermentation of fruit juices, and the dissemination of these cultures to persons in the manufacture of fruit by-products; experiments on the technique of wine-making, including investigations of the fundamental question of fermenting, aging, and preserving of wines.</p> <p>Salaries..... \$4,467.25 Traveling expenses..... 111.39 Supplies..... 1,168.57 General expenses..... 302.25</p> <p>6,049.46</p> <p>(14) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of samples requiring such tests, \$2,096.18. Study of special and miscellaneous agricultural chemical problems requiring attention; study of new methods of analysis, \$2,397.53.</p> <p>Salaries..... \$2,583.67 Supplies..... 953.15 General expenses..... 956.89</p> <p>4,493.71</p>	<p>"General expenses, Bureau of Chemistry, 1911" (laboratory, \$114,000)—Continued.</p> <p>PROJECTS—continued.</p> <p>(9) Sugar laboratory. For continuing previous work and investigation of sugar products; investigation of the sorghum molasses and sirup industry; studies of methods of analysis of sugar-containing plants; new methods of analysis, etc.</p> <p>Salaries..... \$3,300.00 Traveling expenses..... 2,500.00 Supplies..... 2,000.00 General expenses..... 600.00</p> <p>\$8,400.00</p> <p>(10) Microchemical laboratory. For continuation of previous work; study of new methods of detection of misrepresentations and other microscopical work, as requested from time to time by this and other departments of the Government.</p> <p>Salaries..... \$500.00 Supplies..... 100.00 General expenses..... 100.00</p> <p>700.00</p> <p>(11) Bacteriological investigations. Continuation of work previously outlined; study of the identification and classification of the various bacteria, yeast and molds, and other bacteriological work.</p> <p>Salaries..... \$600.00 Supplies..... 100.00 General expenses..... 50.00</p> <p>750.00</p> <p>(12) American food products. Work previously outlined.</p> <p>Salaries..... \$4,900.00 Supplies..... 100.00</p> <p>5,000.00</p> <p>(13) Enological investigations. Continuation of work previously outlined; study of the preparation of native wines from pure must of the grape; study of new methods of preparation of fruits, juices, etc.</p> <p>Salaries..... \$4,550.00 Traveling expenses..... 300.00 Supplies..... 2,000.00 General expenses..... 350.00</p> <p>7,200.00</p> <p>(14) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of samples requiring such tests, \$2,500.00. Study of special and miscellaneous agricultural chemical problems requiring attention; study of new methods of analysis, \$3,000.</p> <p>Salaries..... \$2,800.00 Supplies..... 2,000.00 General expenses..... 700.00</p> <p>5,500.00</p>	<p>"General expenses, Bureau of Chemistry, 1912" (laboratory, \$111,480 submitted)—Continued.</p> <p>PROJECTS—continued.</p> <p>(9) Sugar laboratory. For continuation and extension of work previously outlined; continued studies in collaboration with the Bureau of Plant Industry, of the effect of environment on the sugar content of watermelons, muskmelons, etc., and other allied work arising from time to time.</p> <p>Salaries..... \$3,300.00 Traveling expenses..... 2,500.00 Supplies..... 2,000.00 General expenses..... 600.00</p> <p>\$8,400.00</p> <p>(10) Microchemical laboratory. Continuation and extension of work previously outlined; microscopical studies in collaboration with other laboratories and bureaus of this department; studies of new methods, and other microscopical work necessary, and requested from time to time by this and other bureaus of the department, and by other departments.</p> <p>Salaries..... \$500.00 Supplies..... 100.00 General expenses..... 100.00</p> <p>700.00</p> <p>(11) Bacteriological investigations. Continuation of work previously outlined; bacteriological examinations as requested from time to time by this and other departments.</p> <p>Salaries..... \$600.00 Supplies..... 100.00 General expenses..... 50.00</p> <p>750.00</p> <p>(12) American food products. Work previously outlined.</p> <p>Salaries..... \$4,000.00 Supplies..... 280.00</p> <p>4,280.00</p> <p>(13) Enological investigations. Continuation of the work previously outlined; the study of the pomace and other wastes from the grapes and apples as found at the manufactories; the preparation of samples of native wines and ciders from fruit; the study of pure races of yeasts with a special reference to their efficiencies in producing chemical changes in pure juices at different temperatures; further study of technical questions on the cellar practices with fermented fruit products and the economical handling and storing of the same; study of new methods of analysis and other work of a like nature.</p> <p>Salaries..... \$4,250.00 Traveling expenses..... 300.00 Supplies..... 2,000.00 General expenses..... 350.00</p> <p>6,900.00</p> <p>(14) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of samples requiring such tests, \$2,500. Study of special and miscellaneous agricultural chemical problems requiring attention; study of new methods of analysis, etc., \$2,800.</p> <p>Salaries..... \$2,600.00 Supplies..... 2,000.00 General expenses..... 700.00</p> <p>5,300.00</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460).<sup>1</sup></i>	<i>"General expenses, Bureau of Chemistry, 1911" (food and drugs act, \$702,340).</i>	<i>"Enforcement of the food and drugs act, 1912, \$610,110 submitted."</i>
Lump-fund salaries in Washington.....\$169,700.43	Lump-fund salaries in Washington.....\$175,000.00	Lump-fund salaries in Washington.....\$149,820.00
Lump-fund salaries outside of Washington.....274,785.62	Lump-fund salaries outside of Washington.....302,340.00	Lump-fund salaries outside of Washington.....210,290.00
Stationery.....2,709.90	Stationery.....2,700.00	Stationery.....3,500.00
Miscellaneous supplies and services, equipment, books, machinery, etc.....70,449.62	Miscellaneous supplies and services, equipment, books, machinery, etc.....77,300.00	Miscellaneous supplies and services, equipment, books, machinery, etc.....84,300.00
Furniture.....8,187.92	Furniture.....8,200.00	Furniture.....9,000.00
Fuel.....110.15	Freight.....1,000.00	Freight.....1,500.00
Freight.....632.40	Express.....3,200.00	Express.....3,500.00
Express.....2,957.75	Telegraph.....2,600.00	Telegraph.....3,000.00
Telegraph.....1,715.93	Telephone.....2,100.00	Telephone.....2,500.00
Telephone.....2,110.52	Rent.....26,000.00	Rent.....26,000.00
Rent.....26,946.77	Gas and electricity.....2,400.00	Gas and electricity.....2,600.00
Gas and electricity.....3,306.82	Apparatus, instruments and laboratory material.....30,500.00	Apparatus, instruments and laboratory material.....37,500.00
Apparatus, instruments and laboratory material.....27,023.77	Travel and station and field expenses.....69,000.00	Travel and station and field expenses.....76,600.00
Travel and station and field expenses.....68,896.00		
Total expenditures under above groups to Aug. 31, 1910.....659,533.60		
Repayments to the credit of the appropriation.....89.78		
Net payments under above groups to Aug. 31, 1910.....659,443.82		
Outstanding liabilities on Aug. 31, 1910 (estimated).....31,186.53		
Balance to be turned back in Treasury (estimated).....46,829.65		
Total of above appropriation.....737,460.00	Total of above appropriation (an apparent decrease under 1910 of \$35,120).....702,340.00	Total amount estimated (apparent decrease under 1911 of \$92,230).....610,110.00
NOTE.—The above expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Chemistry. This work fell naturally under the following projects:	NOTE.—\$6,260 transferred to the statutory rolls, making an actual decrease under 1910 of \$28,860. NOTE.—The above expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Chemistry. The work falls naturally under the following projects:	NOTE.—\$152,230 transferred to statutory rolls, making an actual increase over 1911 of \$60,000 submitted. NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Chemistry. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Administrative. Office, clerical and editorial:	(1) Administrative. Office, clerical and editorial:	(1) Administrative. Office, clerical and editorial:
Salaries.....\$9,198.85	Salaries.....\$9,000.00	Salaries.....\$2,000.00
Traveling expenses.....430.32	Traveling expenses.....500.00	Traveling expenses.....500.00
Supplies.....4,714.65	Supplies.....3,500.00	Supplies.....4,800.00
General expenses.....1,493.33	General expenses.....1,000.00	General expenses.....1,100.00
15,837.15	14,000.00	8,400.00
(2) Food division. Analyzing imported food samples; checking analyses of branch laboratories; study of new methods of analysis and methods for detection of adulteration in foods; examination of domestic food products which enter interstate commerce; for investigating the technical methods connected with the manufacture and preparation of foods; investigation of city milk supplies which enter interstate commerce; investigation relative to treatment of oysters, and other work in connection with the enforcement of the food and drugs act.	(2) Food division. For carrying on the work previously outlined; studying new methods of analysis and methods for detection of adulteration in foods; study of the influence of receptacles on the character and composition of foods, and study of the relative value of materials used in the preparation of such receptacles; further study of the oils, fats, and waxes commonly used with foods, and other work in connection with the enforcement of the food and drugs act.	NOTE.—In explanation of the reduction of the amount estimated under this project, a number of the positions under this project during the fiscal year 1911 are recommended for transfer to the statutory roll, for the fiscal year 1912. (2) Food division. Continuation and extension of work previously outlined; study of analytical methods and new methods, with a view to devising methods suitable for detection of adulteration, from time to time, as conditions of manufacture and the character of adulterations change, specifications regarding the manufacture and sanitation of foods; a study of the maturing of whiskies and of the changes in composition that occur in the conversion of cider to vinegar; a study of canned goods, with a view to determining the relative suitability of different varieties of foods; a study of organic acids in various types of foods, for the purpose of improving methods of analysis and increasing the data on which judgment of the purity and soundness of foods may be based; an extensive and elaborate investigation in collaboration with experts concerning the whole question of food colors, their identification

<sup>1</sup> Including \$50,000 in deficiency act of Feb. 25, 1910.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</p> <p>PROJECTS—continued.</p> <p>Salaries..... \$41,573.66  Traveling expenses..... 2,672.11  Supplies..... 12,746.40  General expenses..... 3,680.50  \$60,672.67</p> <p>(3) Drug division. Analyzing imported drug samples and checking analyses of branch laboratories; study of methods of drug analysis, and methods for detecting adulteration thereof; for study of new problems in drugs and their analyses and testing domestic drug samples that enter interstate commerce; for the study of synthetic products and preparations containing them; for the study of the preparations of organic compounds and their analyses; for investigating essential oils; for study of the pharmacological action of drug products, and other work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$36,627.06  Traveling expenses..... 2,272.48  Supplies..... 9,041.72  General expenses..... 3,274.27  51,215.53</p> <p>(4) Branch food and drug inspection laboratories. Examining samples of imported food and drug products and samples of domestic food and drug products, which enter interstate commerce, for conducting hearings and other work in connection with the enforcement of the food and drugs act.</p> <p>New York laboratory:  Salaries..... \$33,717.23  Traveling expenses..... 1,892.36  Supplies..... 7,188.19  General expenses..... 500.00  43,297.78</p> <p>Chicago laboratory:  Salaries..... 13,391.55  Traveling expenses..... 1,523.23  Supplies..... 2,580.76  Rent..... 2,700.00  General expenses..... 535.00  20,730.54</p> <p>Boston laboratory:  Salaries..... 8,397.22  Traveling expenses..... 317.47  Supplies..... 13,981.49  General expenses..... 395.00  13,091.18</p> <p>San Francisco laboratory:  Salaries..... 8,246.50  Traveling expenses..... 296.85  Supplies..... 2,122.28  General expenses..... 410.00  11,075.63</p>	<p>"General expenses, Bureau of Chemistry, 1911" (food and drugs act, \$702,340)—Continued.</p> <p>PROJECTS—continued.</p> <p>Salaries..... \$43,400.00  Traveling expenses..... 2,500.00  Supplies..... 10,000.00  General expenses..... 2,300.00  \$58,200.00</p> <p>(3) Drug division. For carrying on previous work; for studying problems in drugs and their analyses; investigation of certain drug products imported into the United States which may be dangerous to the health of the people, especially the so-called habit-forming drugs; special attention being given to the methods of analysis; continuation of the investigation with regard to the influence of caffeine and caffeine products on metabolism; studies of the poisonous effects of amyl and ethyl alcohol with regard to the toxicity of alcohol and aldehydes; studies of new methods of detection of adulteration; investigation of the so-called soft drinks, which contain ingredients that may be deleterious to health, and study of other domestic products containing habit-forming drugs, and other work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$38,000.00  Traveling expenses..... 2,000.00  Supplies..... 8,500.00  General expenses..... 1,800.00  50,300.00</p> <p>(4) Branch food and drug inspection laboratories. For analyses of samples; for conducting hearings and other work in connection with the enforcement of the food and drugs act.</p> <p>New York laboratory:  Salaries..... \$35,200.00  Traveling expenses..... 1,700.00  Supplies..... 6,000.00  General expenses..... 400.00  43,300.00</p> <p>Chicago laboratory:  Salaries..... 14,700.00  Traveling expenses..... 800.00  Supplies..... 2,000.00  Rent..... 2,700.00  General expenses..... 500.00  20,700.00</p> <p>Boston laboratory:  Salaries..... 9,450.00  Traveling expenses..... 350.00  Supplies..... 2,019.00  General expenses..... 400.00  12,219.00</p> <p>San Francisco laboratory:  Salaries..... 9,250.00  Traveling expenses..... 300.00  Supplies..... 2,000.00  General expenses..... 400.00  11,950.00</p>	<p>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</p> <p>PROJECTS—continued.</p> <p>and the construction of analytical trees for this purpose; a study of the affects of aging on the composition, physical characteristics and bread-making properties of flour; a study of phosphoric acids in jams and jellies; composition of vanilla extracts prepared by different methods, and the detection of caramel therein; and other work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$45,500.00  Traveling expenses..... 3,000.00  Supplies..... 13,400.00  General expenses..... 3,000.00  \$64,900.00</p> <p>(3) Drug division. Continuation and extension of work previously outlined; study of new methods of analysis and methods for detecting adulteration of drug products; special investigation of certain drug products imported into the United States which may be dangerous to the health of the people will be continued, such as preparations sold indiscriminately, containing habit-forming drugs; the study of the methods of determining quantitatively the various alkaloids and other plant constituents contained in the complex mixtures upon the market; extension of the imported drug work; continuation of the work on essential oils and synthetic drug products; continuation of pharmacological studies and other work necessary in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$40,000.00  Traveling expenses..... 2,700.00  Supplies..... 9,200.00  General expenses..... 2,600.00  54,500.00</p> <p>(4) Branch food and drug inspection laboratories. For analysis of samples; for conducting hearings; special investigations necessary in connection with the enforcement of the food and drugs act. During last year inspection at important nonlaboratory ports has been systematized and placed within the jurisdiction of the respective laboratory ports convenient thereto, and other work in connection with the enforcement of the food and drugs act.</p> <p>New York laboratory:  Salaries..... \$36,200.00  Traveling expenses..... 2,100.00  Supplies..... 8,000.00  General expenses..... 500.00  46,800.00</p> <p>Chicago laboratory:  Salaries..... 16,200.00  Traveling expenses..... 1,050.00  Supplies..... 3,000.00  Rent..... 2,700.00  General expenses..... 600.00  23,550.00</p> <p>Boston laboratory:  Salaries..... 9,650.00  Traveling expenses..... 550.00  Supplies..... 2,500.00  General expenses..... 500.00  13,200.00</p> <p>San Francisco laboratory:  Salaries..... 9,350.00  Traveling expenses..... 500.00  Supplies..... 2,500.00  General expenses..... 400.00  12,750.00</p>

<sup>1</sup> Including special laboratory equipment installed.

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</i>	<i>"General expenses, Bureau of Chemistry, 1911 (food and drugs act, \$702,340)—Continued.</i>	<i>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(4) Branch food and drug inspection laboratories—Continued.	(4) Branch food and drug inspection laboratories—Continued.	(4) Branch food and drug inspection laboratories—Continued.
Denver laboratory:	Denver laboratory:	Denver laboratory:
Salaries.....\$6,878.33	Salaries.....\$7,400.00	Salaries.....\$7,500.00
Supplies.....1,019.26	Traveling expenses..100.00	Traveling expenses..500.00
Rent.....1,200.00	Supplies.....1,000.00	Supplies.....1,500.00
General expenses.....247.00	Rent.....1,200.00	Rent.....1,200.00
\$9,344.59	General expenses.....250.00	General expenses....350.00
	\$9,950.00	\$11,050.00
St. Paul laboratory:	St. Paul laboratory:	St. Paul laboratory:
Salaries.....6,180.00	Salaries.....6,700.00	Salaries.....6,800.00
Traveling expenses.....853.36	Traveling expenses..500.00	Traveling expenses..800.00
Supplies.....881.60	Supplies.....900.00	Supplies.....1,200.00
General expenses.....285.00	General expenses....300.00	General expenses....400.00
8,199.96	8,400.00	9,200.00
Philadelphia laboratory:	Philadelphia laboratory:	Philadelphia laboratory:
Salaries.....5,828.98	Salaries.....6,300.00	Salaries.....6,400.00
Traveling expenses.....245.65	Traveling expenses..250.00	Traveling expenses..500.00
Supplies.....834.85	Supplies.....850.00	Supplies.....1,000.00
General expenses.....405.00	General expenses....400.00	General expenses....400.00
7,314.48	7,800.00	8,300.00
Cincinnati laboratory:	Cincinnati laboratory:	Cincinnati laboratory:
Salaries.....5,366.67	Salaries.....5,900.00	Salaries.....6,000.00
Traveling expenses.....203.10	Traveling expenses..200.00	Traveling expenses..500.00
Supplies.....1,312.71	Supplies.....1,200.00	Supplies.....1,800.00
Rent.....1,500.00	Rent.....1,920.00	Rent.....1,920.00
General expenses.....230.14	General expenses....200.00	General expenses....400.00
8,612.62	9,420.00	10,620.00
Buffalo laboratory:	Buffalo laboratory:	Buffalo laboratory:
Salaries.....5,081.17	Salaries.....5,600.00	Salaries.....5,700.00
Traveling expenses.....163.67	Traveling expenses..200.00	Traveling expenses..500.00
Supplies.....1,576.51	Supplies.....1,000.00	Supplies.....1,600.00
General expenses.....345.20	General expenses....350.00	General expenses....400.00
7,166.55	7,150.00	8,200.00
Seattle laboratory:	Seattle laboratory:	Seattle laboratory:
Salaries.....5,091.91	Salaries.....5,600.00	Salaries.....5,700.00
Traveling expenses.....135.30	Traveling expenses..150.00	Traveling expenses..500.00
Supplies.....1,151.50	Supplies.....1,000.00	Supplies.....1,500.00
Rent.....1,500.00	Rent.....1,500.00	Rent.....1,500.00
General expenses.....215.32	General expenses....300.00	General expenses....400.00
8,094.03	8,550.00	9,600.00
Kansas City laboratory:	Kansas City laboratory:	Kansas City laboratory:
Salaries.....4,655.00	Salaries.....5,300.00	Salaries.....5,400.00
Traveling expenses.....167.72	Traveling expenses..200.00	Traveling expenses..300.00
Supplies.....1,117.39	Supplies.....1,000.00	Supplies.....1,500.00
General expenses.....350.00	General expenses....350.00	General expenses....500.00
6,290.11	6,850.00	7,700.00
Portland laboratory:	Portland laboratory:	Portland laboratory:
Salaries.....4,353.66	Salaries.....4,900.00	Salaries.....5,000.00
Traveling expenses.....155.70	Traveling expenses..200.00	Traveling expenses..500.00
Supplies.....791.16	Supplies.....800.00	Supplies.....1,200.00
Rent.....1,260.00	Rent.....1,260.00	Rent.....1,260.00
General expenses.....234.70	General expenses....240.00	General expenses....400.00
6,795.22	7,400.00	8,360.00
St. Louis laboratory:	St. Louis laboratory:	St. Louis laboratory:
Salaries.....4,287.50	Salaries.....4,700.00	Salaries.....4,800.00
Traveling expenses.....72.36	Traveling expenses..100.00	Traveling expenses..500.00
Supplies.....877.88	Supplies.....900.00	Supplies.....1,400.00
Rent.....1,296.00	Rent.....1,296.00	Rent.....1,296.00
General expenses.....215.42	General expenses....225.00	General expenses....400.00
6,749.16	7,221.00	8,396.00
New Orleans laboratory:	New Orleans laboratory:	New Orleans laboratory:
Salaries.....4,241.94	Salaries.....5,000.00	Salaries.....5,100.00
Supplies.....793.49	Supplies.....700.00	Supplies.....1,000.00
General expenses.....152.00	Traveling expenses..100.00	Traveling expenses..200.00
5,187.43	General expenses....200.00	General expenses....300.00
	6,000.00	6,600.00
Omaha laboratory:	Omaha laboratory:	Omaha laboratory:
Salaries.....4,240.00	Salaries.....4,700.00	Salaries.....4,800.00
Traveling expenses.....139.96	Traveling expenses..200.00	Traveling expenses..500.00
Supplies.....1,035.35	Supplies.....1,000.00	Supplies.....1,500.00
General expenses.....233.73	General expenses....250.00	General expenses....400.00
5,649.04	6,150.00	7,200.00
Pittsburg laboratory:	Pittsburg laboratory:	Pittsburg laboratory:
Salaries.....4,488.33	Salaries.....5,000.00	Salaries.....5,100.00
Traveling expenses.....51.74	Traveling expenses..100.00	Traveling expenses..500.00
Supplies.....569.73	Supplies.....600.00	Supplies.....1,000.00
Rent.....1,580.00	Rent.....1,580.00	Rent.....1,580.00
General expenses.....202.51	General expenses....200.00	General expenses....400.00
6,892.31	7,480.00	8,580.00
Detroit laboratory:	Detroit laboratory:	Detroit laboratory:
Salaries.....4,130.66	Salaries.....4,600.00	Salaries.....4,700.00
Traveling expenses.....19.97	Traveling expenses..100.00	Traveling expenses..400.00
Supplies.....913.94	Supplies.....900.00	Supplies.....1,400.00
Rent.....850.00	Rent.....850.00	Rent.....850.00
General expenses.....190.00	General expenses....200.00	General expenses....400.00
6,104.57	6,650.00	7,750.00
Galveston laboratory:	Galveston laboratory:	Galveston laboratory:
Salaries.....4,084.44	Salaries.....4,600.00	Salaries.....4,700.00
Traveling expenses.....294.95	Traveling expenses..300.00	Traveling expenses..500.00
Supplies.....1,001.14	Supplies.....1,000.00	Supplies.....1,500.00
General expenses.....230.00	General expenses....250.00	General expenses....400.00
5,610.53	6,150.00	7,100.00

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES, DEPARTMENT OF AGRICULTURE.

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282; to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.																																																																																														
<p><i>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(4) Branch food and drug inspection laboratories—Contd.</p> <p>Savannah laboratory:</p> <table><tr><td>Salaries.....</td><td>\$3,923.33</td></tr><tr><td>Traveling expenses.....</td><td>34.85</td></tr><tr><td>Supplies.....</td><td>940.01</td></tr><tr><td>General expenses.....</td><td>187.00</td></tr><tr><td></td><td>\$5,085.19</td></tr></table> <p>Nashville laboratory:</p> <table><tr><td>Salaries.....</td><td>3,789.16</td></tr><tr><td>Traveling expenses.....</td><td>99.25</td></tr><tr><td>Supplies.....</td><td>859.38</td></tr><tr><td>General expenses.....</td><td>163.43</td></tr><tr><td></td><td>4,916.22</td></tr></table> <p>Honolulu laboratory:</p> <table><tr><td>Salaries.....</td><td>1,711.67</td></tr><tr><td>Supplies.....</td><td>307.33</td></tr><tr><td>Rent.....</td><td>300.00</td></tr><tr><td>General expenses.....</td><td>145.00</td></tr><tr><td></td><td>2,464.00</td></tr></table> <p>Total for branch laboratories.....198,671.14</p>	Salaries.....	\$3,923.33	Traveling expenses.....	34.85	Supplies.....	940.01	General expenses.....	187.00		\$5,085.19	Salaries.....	3,789.16	Traveling expenses.....	99.25	Supplies.....	859.38	General expenses.....	163.43		4,916.22	Salaries.....	1,711.67	Supplies.....	307.33	Rent.....	300.00	General expenses.....	145.00		2,464.00	<p><i>"General expenses, Bureau of Chemistry, 1911" (food and drugs act, \$702,340)—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(4) Branch food and drug inspection laboratories—Continued.</p> <p>Savannah laboratory:</p> <table><tr><td>Salaries.....</td><td>\$4,500.00</td></tr><tr><td>Traveling expenses.....</td><td>100.00</td></tr><tr><td>Supplies.....</td><td>900.00</td></tr><tr><td>General expenses.....</td><td>200.00</td></tr><tr><td></td><td>\$5,700.00</td></tr></table> <p>Nashville laboratory:</p> <table><tr><td>Salaries.....</td><td>4,200.00</td></tr><tr><td>Traveling expenses.....</td><td>100.00</td></tr><tr><td>Supplies.....</td><td>850.00</td></tr><tr><td>General expenses.....</td><td>200.00</td></tr><tr><td></td><td>5,350.00</td></tr></table> <p>Honolulu laboratory:</p> <table><tr><td>Salaries.....</td><td>1,900.00</td></tr><tr><td>Traveling expenses.....</td><td>100.00</td></tr><tr><td>Supplies.....</td><td>300.00</td></tr><tr><td>Rent.....</td><td>300.00</td></tr><tr><td>General expenses.....</td><td>200.00</td></tr><tr><td></td><td>2,800.00</td></tr></table> <p>Total for branch laboratories.....207,190.00</p>	Salaries.....	\$4,500.00	Traveling expenses.....	100.00	Supplies.....	900.00	General expenses.....	200.00		\$5,700.00	Salaries.....	4,200.00	Traveling expenses.....	100.00	Supplies.....	850.00	General expenses.....	200.00		5,350.00	Salaries.....	1,900.00	Traveling expenses.....	100.00	Supplies.....	300.00	Rent.....	300.00	General expenses.....	200.00		2,800.00	<p><i>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(4) Branch food and drug inspection laboratories—Continued.</p> <p>Savannah laboratory:</p> <table><tr><td>Salaries.....</td><td>\$4,600.00</td></tr><tr><td>Traveling expenses.....</td><td>300.00</td></tr><tr><td>Supplies.....</td><td>1,400.00</td></tr><tr><td>General expenses.....</td><td>300.00</td></tr><tr><td></td><td>\$6,600.00</td></tr></table> <p>Nashville laboratory:</p> <table><tr><td>Salaries.....</td><td>4,300.00</td></tr><tr><td>Traveling expenses.....</td><td>300.00</td></tr><tr><td>Supplies.....</td><td>1,400.00</td></tr><tr><td>General expenses.....</td><td>300.00</td></tr><tr><td></td><td>6,300.00</td></tr></table> <p>Honolulu laboratory:</p> <table><tr><td>Salaries.....</td><td>2,000.00</td></tr><tr><td>Traveling expenses.....</td><td>200.00</td></tr><tr><td>Supplies.....</td><td>500.00</td></tr><tr><td>Rent.....</td><td>300.00</td></tr><tr><td>General expenses.....</td><td>200.00</td></tr><tr><td></td><td>3,200.00</td></tr></table> <p>Total for branch laboratories.....231,056.00</p>	Salaries.....	\$4,600.00	Traveling expenses.....	300.00	Supplies.....	1,400.00	General expenses.....	300.00		\$6,600.00	Salaries.....	4,300.00	Traveling expenses.....	300.00	Supplies.....	1,400.00	General expenses.....	300.00		6,300.00	Salaries.....	2,000.00	Traveling expenses.....	200.00	Supplies.....	500.00	Rent.....	300.00	General expenses.....	200.00		3,200.00
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General expenses.....	1,200.00																																																																																															
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<p>(6) Food research work. Investigations relative to handling, shipping and preservation of poultry, eggs, fish, game, and other foods, with special reference to putridity and decomposition of these products, in connection with the determination of their fitness or unfitness for interstate commerce, under the food and drugs act, and to perform inspection work, food research work; study of methods of analyses; experiments to indicate the effect on the keeping quality of fowls after the various methods of handling; and other work in connection with the enforcement of the food and drugs act.</p> <table><tr><td>Salaries.....</td><td>\$12,947.27</td></tr><tr><td>Traveling expenses.....</td><td>4,442.59</td></tr><tr><td>Supplies.....</td><td>6,070.39</td></tr><tr><td>Rent.....</td><td>2,135.00</td></tr><tr><td>General expenses.....</td><td>567.44</td></tr><tr><td></td><td>26,162.69</td></tr></table>	Salaries.....	\$12,947.27	Traveling expenses.....	4,442.59	Supplies.....	6,070.39	Rent.....	2,135.00	General expenses.....	567.44		26,162.69	<p>(6) Food research work. Continuation of work previously outlined; study of industrial problems relating to the handling of poultry and eggs by investigations conducted in the packing houses and during transportation, as well as in the warehouse, and other studies of storage, handling, and transportation of these products; bacteriological, chemical, and histological investigations of the laboratory are coincident with work in the field.</p> <table><tr><td>Salaries.....</td><td>\$14,050.00</td></tr><tr><td>Traveling expenses.....</td><td>4,000.00</td></tr><tr><td>Supplies.....</td><td>5,000.00</td></tr><tr><td>Rent.....</td><td>2,250.00</td></tr><tr><td>General expenses.....</td><td>600.00</td></tr><tr><td></td><td>25,900.00</td></tr></table>	Salaries.....	\$14,050.00	Traveling expenses.....	4,000.00	Supplies.....	5,000.00	Rent.....	2,250.00	General expenses.....	600.00		25,900.00	<p>(6) Food research work. Continuation and extension of work previously outlined; special attention being given to the handling of eggs along similar lines previously outlined, and continued experiment of the shipping and marketing of fowls chilled in dry, cool air, also in water. Problems relative to the wet and dry packing will be continued; a study of the problems on the strictly scientific side, which involves work on the relation of humidity, osmosis, temperature, etc., to bacterial growth and chemical change, both bacterial and enzymic; and other work in connection with the enforcement of the food and drugs act.</p> <table><tr><td>Salaries.....</td><td>\$15,050.00</td></tr><tr><td>Traveling expenses.....</td><td>5,000.00</td></tr><tr><td>Supplies.....</td><td>7,000.00</td></tr><tr><td>Rent.....</td><td>2,250.00</td></tr><tr><td>General expenses.....</td><td>600.00</td></tr><tr><td></td><td>29,900.00</td></tr></table>	Salaries.....	\$15,050.00	Traveling expenses.....	5,000.00	Supplies.....	7,000.00	Rent.....	2,250.00	General expenses.....	600.00		29,900.00																																																										
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<p>(7) Enological investigations. Study of the preparation, fermentation, and bottling of wine, fruit juices, etc., in connection with the enforcement of the food and drugs act.</p> <table><tr><td>Salaries.....</td><td>\$2,538.66</td></tr><tr><td>Traveling expenses.....</td><td>1,611.89</td></tr><tr><td>Supplies.....</td><td>5,454.05</td></tr><tr><td>Rent.....</td><td>1,150.00</td></tr><tr><td>General expenses.....</td><td>550.00</td></tr><tr><td></td><td>11,304.60</td></tr></table>	Salaries.....	\$2,538.66	Traveling expenses.....	1,611.89	Supplies.....	5,454.05	Rent.....	1,150.00	General expenses.....	550.00		11,304.60	<p>(7) Enological investigations. Continuation of work previously outlined; collection, test, and chemical examination of native wines of the Lake Erie district; special investigations on the preparation, preservation, and handling of wines, and other work necessary and incident to the enforcement of the food and drugs act.</p> <table><tr><td>Salaries.....</td><td>\$5,000.00</td></tr><tr><td>Traveling expenses.....</td><td>1,500.00</td></tr><tr><td>Supplies.....</td><td>4,500.00</td></tr><tr><td>Rent.....</td><td>1,150.00</td></tr><tr><td>General expenses.....</td><td>550.00</td></tr><tr><td></td><td>12,700.00</td></tr></table>	Salaries.....	\$5,000.00	Traveling expenses.....	1,500.00	Supplies.....	4,500.00	Rent.....	1,150.00	General expenses.....	550.00		12,700.00	<p>(7) Enological investigations. Continuation and extension of work previously outlined; continuation of the chemical examination of the grape crop in northern and eastern grape belts of the United States; studies of the preparation, preservation, and handling of wines, and study of other problems necessary to secure required data for use in the enforcement of the food and drugs act, and other like work necessary, arising from time to time in this connection.</p> <table><tr><td>Salaries.....</td><td>\$5,500.00</td></tr><tr><td>Traveling expenses.....</td><td>1,950.00</td></tr><tr><td>Supplies.....</td><td>5,359.00</td></tr><tr><td>Rent.....</td><td>1,150.00</td></tr><tr><td>General expenses.....</td><td>550.00</td></tr><tr><td></td><td>14,509.00</td></tr></table>	Salaries.....	\$5,500.00	Traveling expenses.....	1,950.00	Supplies.....	5,359.00	Rent.....	1,150.00	General expenses.....	550.00		14,509.00																																																										
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*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General Expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</i>	<i>"General expenses, Bureau of Chemistry, 1911" (food and drugs act, \$702,340)—Continued.</i>	<i>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(8) Miscellaneous division. Study of mineral waters; examination of samples under the food and drugs act; study of methods of analyses of cattle and poultry foods, etc.; and studies of methods of detection of adulteration of cattle foods, grains, etc., in connection with the enforcement of the food and drugs act.	(8) Miscellaneous division. Examination of bottled mineral and table waters and the composition of cattle and poultry foods and remedies as they appear on the market; examination of samples of cattle and poultry foods and remedies, and of mineral waters, and other work in connection with the enforcement of the food and drugs act.	(8) Miscellaneous division. Continuation and extension of work previously outlined; examination of mineral waters, cattle foods found in interstate commerce, and foreign waters imported into this country, in connection with the enforcement of the food and drugs act; study of new methods of analysis; study of the radioactivity of mineral waters, including the investigation of this subject at the source of certain springs; a study of sulphur waters, and other work necessary along these lines, in connection with the enforcement of the food and drugs act.
Salaries..... \$24,084.17	Salaries..... \$25,500.00	Salaries..... \$26,200.00
Traveling expenses..... 450.25	Traveling expenses.. 400.00	Traveling expenses.. 900.00
Supplies..... 3,536.94	Supplies..... 3,000.00	Supplies..... 4,500.00
General expenses..... 1,274.00	General expenses.... 1,200.00	General expenses.... 1,300.00
\$29,345.36	\$30,100.00	\$32,900.00
(9) Animal physiological chemistry. Studies of methods of analysis employed in physiological work; digestion experiments on lower animals, including metabolism and feeding experiments on lower animals, using in the former organic and inorganic forms of phosphorus and sulphur; studies of enzymes and their adulteration and chemical and physiological methods of analysis; studies of new methods of analysis, and other work in connection with the enforcement of the food and drugs act.	(9) Animal physiological chemistry. Continuation of work previously outlined; studying new methods of analysis; continuation of the metabolism experiments and related food work; study of enzymes, and especially their reaction to ordinary and special analytical methods; analysis of samples and other work in connection with the food and drugs act.	(9) Animal physiological chemistry. Continuation of work previously outlined; study of new methods of analysis; examination of samples in connection with the enforcement of the food and drugs act. An exhaustive examination of infant and invalids' foods now on the market has been begun and a study of the character, preparation, and manufacture of foods for infant feeding will be made, and other work of like nature in connection with the enforcement of the food and drugs act.
Salaries..... \$10,134.67	Salaries..... \$7,300.00	Salaries..... \$7,800.00
Traveling expenses..... 145.54	Traveling expenses.. 150.00	Traveling expenses.. 500.00
Supplies..... 1,159.80	Supplies..... 600.00	Supplies..... 1,500.00
General expenses..... 965.00	General expenses.... 900.00	General expenses.... 900.00
12,405.01	8,950.00	10,700.00
(10) Vegetable physiological chemistry. Investigations of wheat; milling and the bleaching of flour, and other investigations of like nature, in connection with the enforcement of the food and drugs act.	(10) Vegetable physiological chemistry. Continuation of work previously outlined; investigation of the baking value of flour; study of the quality of yeast used therein; study of the food value of high phosphorus-containing portion of wheat; study of effects of bleaching on flour, and other work in connection with the enforcement of the food and drugs act.	(10) Vegetable physiological chemistry. Continuation of work previously outlined.
Salaries..... \$974.76	Salaries..... \$1,000.00	Salaries..... \$1,000.00
Traveling expenses..... 343.53	Traveling expenses.. 300.00	Traveling expenses.. 500.00
Supplies..... 937.56	Supplies..... 300.00	Supplies..... 1,000.00
General expenses..... 200.00	General expenses.... 200.00	General expenses.... 200.00
2,455.85	1,800.00	2,700.00
(11) Dairy laboratory. Analysis of dairy products; in connection with the enforcement of the food and drugs act; investigation of the manufacture and preparation of condensed milk; study of new methods of analysis and other work necessary and incident to the enforcement of the food and drugs act.	(11) Dairy laboratory. Continuation of work previously outlined; work on analytical methods and checking of analyses of samples received from branch laboratories; analyses of samples in connection with the enforcement of the food and drugs act.	(11) Dairy laboratory. Continuation of work previously outlined; completion of the study of the process of condensing milk to determine the practical limit of condensation consistent with good mechanical condition; continuation of the work of preparation of analytical methods and checking of analyses from branch laboratories; study of all brands of malted milk in the United States, and other work in connection with the enforcement of the food and drugs act.
Salaries..... \$8,795.54	Salaries..... \$9,300.00	Salaries..... \$9,800.00
Traveling expenses..... 1,176.32	Traveling expenses.. 500.00	Traveling expenses.. 800.00
Supplies..... 1,353.86	Supplies..... 1,000.00	Supplies..... 1,800.00
General expenses..... 729.00	General expenses.... 600.00	General expenses.... 600.00
12,054.72	11,400.00	13,000.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</p> <p>PROJECTS—continued.</p> <p>(12) Microchemical laboratory. Microscopical examinations of samples of foods and drugs being analyzed in connection with the enforcement of the food and drugs act; study of new methods of analysis and perfecting methods for detection of adulteration of food products, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$7,444.17 Traveling expenses..... 692.10 Supplies..... 1,434.28 General expenses..... 555.00</p> <p>\$10,125.55</p> <p>(13) Bacteriological investigations. Bacteriological examinations of samples of foods and drugs; studying the wholesomeness and sanitary condition of foods; for investigating, in collaboration with the drug division of this bureau, the sterility of various dressings, bandages, pads, ligatures, etc., used in surgery; for bacteriological examinations of all samples for other laboratories requiring such, particularly of waters, milks, creams, and other food products entering interstate commerce; study of methods of examination; special attention is being paid to bacteriological examinations of oysters and milk supplies, and other work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$7,111.10 Traveling expenses..... 1,109.18 Supplies..... 2,417.55 General expenses..... 555.00</p> <p>11,192.83</p> <p>(14) Sugar laboratory. Examinations of sugar, sirup, and honey samples, in connection with the enforcement of the food and drugs act; study of new methods of analysis of sugar, sirup, and like foods, and other work in connection with the enforcement of the food and drugs act, as relating to these products.</p> <p>Salaries..... \$6,448.17 Traveling expenses..... 291.18 Supplies..... 1,037.90 General expenses..... 325.00</p> <p>8,102.25</p> <p>(15) Leather and paper laboratory. Examinations of samples of turpentine and rosins in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$1,720.00 Traveling expenses..... 123.32 Supplies..... 50.92 General expenses..... 225.00</p> <p>2,119.24</p> <p>(16) Contracts laboratory. Examination of contract materials used in the bureau, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$345.33</p> <p>845.33</p>	<p>"General expenses, Bureau of Chemistry, 1911" (food and drugs act, \$702,340)—Continued.</p> <p>PROJECTS—Continued.</p> <p>(12) Microchemical laboratory. Continuation of work previously outlined; study of new methods of detecting adulteration, and other microscopical work; microscopical examination of samples taken in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$8,250.00 Traveling expenses.. 700.00 Supplies..... 1,200.00 General expenses.... 550.00</p> <p>\$10,700.00</p> <p>(13) Bacteriological investigations. Continuation of previous work; testing germicidal, antiseptic and preservative drugs and chemicals, and fruit juices, and other bacteriological work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$7,950.00 Traveling expenses.. 900.00 Supplies..... 1,800.00 General expenses.... 550.00</p> <p>11,200.00</p> <p>(14) Sugar laboratory. Continuing previous work; examination and analyses of maple sirup, honey, and like articles, study of new methods of detection of adulteration of these products, and other work in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$7,000.00 Traveling expenses.. 300.00 Supplies..... 900.00 General expenses.... 350.00</p> <p>8,550.00</p> <p>(15) Leather and paper laboratory. Examination of samples of turpentine and rosins, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$2,000.00 Traveling expenses.. 125.00 Supplies..... 200.00 General expenses.... 225.00</p> <p>2,550.00</p> <p>(16) Contracts laboratory. Examination of contract materials used in the bureau, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$1,200.00 Supplies..... 200.00 General expenses.... 200.00</p> <p>1,600.00</p>	<p>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</p> <p>PROJECTS—continued.</p> <p>(12) Microchemical laboratory. Continuation and extension of work previously outlined; investigation relative to the condition of eggs and egg products, in connection with which field work is contemplated; study of alkaloids; histological study of the structure of drug plants, for the purpose of identifying the ingredients in medicinal mixtures; study of mustards, the information obtained to be applied in connection with the examination of this product, and other work necessary in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$8,750.00 Traveling expenses.. 900.00 Supplies..... 1,600.00 General expenses.... 600.00</p> <p>\$11,850.00</p> <p>(13) Bacteriological investigations. Continuation and extension of work previously outlined; special bacteriological work relative to the oyster and egg industry, including stored, frozen and desiccated products, milk, ice cream, and water and the bacteriological examination of other samples of foods and drugs, and other bacteriological work necessary in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$8,450.00 Traveling expenses.. 1,500.00 Supplies..... 2,500.00 General expenses.... 600.00</p> <p>13,050</p> <p>(14) Sugar laboratory. Continuation and extension of work previously outlined; continuation of the examination of samples and other work of this nature required from time to time, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$7,500.00 Traveling expenses.. 500.00 Supplies..... 1,400.00 General expenses.... 500.00</p> <p>9,900.00</p> <p>(15) Leather and paper laboratory. Examination of samples of turpentine and rosins in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$2,500.00 Traveling expenses.. 250.00 Supplies..... 500.00 General expenses.... 225.00</p> <p>3,475.00</p> <p>(16) Contracts laboratory. Examination of contract materials used in the bureau, in connection with the enforcement of the food and drugs act.</p> <p>Salaries..... \$1,200.00 Supplies..... 500.00 General expenses.... 200.00</p> <p>1,900.00</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Chemistry—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>"General expenses, Bureau of Chemistry, 1910" (food and drugs act, \$737,460)—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(17) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of all samples requiring such tests in connection with the enforcement of the food and drugs act, \$4,660.</p> <p>Collaboration with State officials in connection with the enforcement of the food and drugs act, \$4,166.77.</p> <p>Study of special and miscellaneous chemical problems arising from time to time, requiring attention, and to secure information to be used in connection with the enforcement of the food and drugs act, \$989.</p> <p>Salaries..... \$7,802.01 Traveling expenses..... 215.60 Supplies..... 1,630.38 General expenses..... 167.78</p> <p>(18) Expert witness fees: Fees..... 31,898.91</p> <p>In the prosecution of cases under the food and drugs act it is essential in a great many cases to have expert testimony, both professional and trade experts, in order to convince the courts relative to certain points arising from time to time.</p> <p>(19) Board of food and drug inspection. Conducting hearings and correspondence, and making recommendations on cases, and decisions in the enforcement of the food and drugs act.</p> <p>Salaries..... \$6,941.12 Traveling expenses..... 1,717.78 Supplies..... 134.81 General expenses..... 1,140.83</p> <p>(20) Referee board of scientific experts to the Secretary of Agriculture:</p> <p>Salaries..... \$53,230.81 Traveling expenses..... 2,000.00 Supplies..... 16,000.00</p> <p>RECAPITULATION.</p> <p>Total payments for the entire Bureau of Chemistry to Aug. 31, 1910..... 837,125.30 Repayments to credit of appropriation..... 92.78</p> <p>Total expenditures to Aug. 31, 1910..... 837,032.52 Outstanding liabilities on Aug. 31, 1910, (estimated)..... 33,549.08 Balance to be turned back in Treasury (estimated)..... 59,978.40</p> <p>Total of all appropriations for the Bureau of Chemistry..... 930,560.00</p>	<p><i>"General expenses, Bureau of Chemistry, 1911," (food and drugs act, \$702,340)—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(17) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of all samples requiring such tests, in connection with the enforcement of the food and drugs act, \$4,700.</p> <p>Collaboration with State officials, in connection with the enforcement of the food and drugs act, \$4,000.</p> <p>Study of special and miscellaneous chemical problems arising from time to time, requiring attention, and securing information to be used in connection with the enforcement of the food and drugs act, \$4,000.</p> <p>Salaries..... \$11,590.00 Traveling expenses..... 200.00 Supplies..... 600.00 General expenses..... 310.00</p> <p>(18) Expert witness fees: Fees..... 30,000.00</p> <p>In the prosecution of cases under the food and drugs act, it is essential in a great many cases to have expert testimony, both professional and trade experts, in order to convince the courts relative to certain points arising from time to time.</p> <p>(19) Board of food and drug inspection. For conducting hearings and correspondence in the enforcement of the food and drugs act.</p> <p>Salaries..... \$8,800.00 Traveling expenses..... 1,700.00 Supplies..... 300.00 General expenses..... 700.00</p> <p>(20) Referee board of scientific experts to the Secretary of Agriculture:</p> <p>Salaries..... \$55,000.00 Traveling expenses..... 4,000.00 Supplies..... 16,000.00</p> <p>Total of all appropriations for the entire Bureau of Chemistry (a decrease under 1910 of \$34,860). 895,700.00</p>	<p><i>"Enforcement of the food and drugs act, 1912, \$610,110 submitted"—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(17) Special investigations: Nitrogen tests and investigations. For examination for nitrogen of all samples requiring such tests in connection with the enforcement of the food and drugs act, \$5,000.</p> <p>Collaboration with State officials in connection with the enforcement of the food and drugs act, \$4,500.</p> <p>Study of special and miscellaneous chemical problems arising from time to time, requiring attention, and securing information to be used in connection with the enforcement of the food and drugs act, \$5,000.</p> <p>Salaries..... \$11,590.00 Traveling expenses..... 500.00 Supplies..... 1,900.00 General expenses..... 510.00</p> <p>(18) Expert witness fees: Fees..... 30,000.00</p> <p>In the prosecution of cases under the food and drugs act it is essential in a great many cases to have expert testimony, both professional and trade experts, in order to convince the courts relative to certain points arising from time to time.</p> <p>Total amount estimated for the entire Bureau of Chemistry (an increase over 1911 of \$68,080 submitted)..... 963,780.00</p>

NOTE.—Under the decisions of the Comptroller of May, 1909, it is necessary for the Bureau of Chemistry to pay expenses of expert witnesses and the traveling expenses of the members of the Department of Agriculture, when traveling to court to testify in cases arising under the food and drugs act. This additional expense necessitates an addition to the total appropriations of the bureau, in order to properly enforce the food and drugs act of June 30, 1906.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p.1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

BUREAU OF SOILS.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Bureau of Soils, 1910, \$35,500.	Salaries, Bureau of Soils, 1911, \$37,420.	Salaries, Bureau of Soils, 1912, \$52,020.
Whitney, Milton..... Chief of bureau, at \$3,500..... \$3,500.00	1 soil physicist, who shall be chief of bureau..... \$3,500.00	1 soil physicist, who shall be chief of bureau (increase of \$1,000 submitted)..... \$4,500.00
Rice, A. G..... Chief clerk, at \$2,000..... 2,000.00	1 chief clerk..... 2,000.00	1 chief clerk..... 2,000.00
Drake, Chas. A..... Clerk, class 4..... 1,800.00	2 clerks, class 4..... 3,600.00	1 executive assistant (by transfer from lump fund for General Expenses, Soil Survey)..... 2,000.00
Seaton, Chas. H..... Clerk, class 4..... 1,800.00	1 clerk, class 3..... 1,600.00	3 clerks, class 4 (increase of one submitted)..... 5,400.00
Wolfe, C. A..... Clerk, class 3..... 1,560.00	3 clerks, class 2..... 4,200.00	2 clerks, class 3 (increase of one submitted)..... 3,200.00
Clevenger, O. B..... Clerk, class 2..... 1,386.33	1 clerk..... 1,260.00	4 clerks, class 2 (increase of one submitted)..... 5,600.00
King, G. B..... Clerk, class 2..... 1,400.00	7 clerks, class 1..... 8,400.00	1 clerk..... 1,260.00
Patterson, M. W..... Clerk, class 2..... 1,400.00	1 draftsman..... 1,200.00	8 clerks, class 1 (increase of one submitted)..... 9,600.00
Cummings, R. F..... Clerk, class 1..... 1,200.00	1 draftsman..... 1,000.00	4 clerks, at \$1,000 each..... 4,000.00
Dickson, E. J..... Clerk, class 1..... 1,200.00	4 clerks, at \$1,000 each..... 4,000.00	3 clerks, at \$840 each..... 2,520.00
Flavin, P. T..... Clerk, class 1..... 1,170.93	3 clerks, at \$840 each..... 2,520.00	1 publicity agent (by transfer from lump fund for General Expenses, Administrative Expenses)..... 1,800.00
Kemper, J. M., jr..... Clerk, class 1..... 1,200.00	1 photographer..... 1,200.00	1 soil bibliographer (by transfer from lump fund for General Expenses, Soil Laboratory Investigations)..... 1,400.00
McKreicher, J. W..... Clerk, class 1..... 1,200.00	1 messenger..... 720.00	3 draftsmen, at \$1,200 each (increase of two submitted, one by transfer from lump fund for General Expenses, Soil Survey, and one new place)..... 3,600.00
Stewart, Janette..... Clerk, class 1..... 1,200.00	1 messenger or laborer..... 480.00	1 draftsman..... 1,000.00
Wieser, L..... Draftsman, at \$1,200..... 1,200.00	1 laborer..... 600.00	1 photographer..... 1,200.00
Briscoe, A. J..... Draftsman, at \$1,000..... 1,000.00	1 laborer..... 300.00	1 messenger..... 720.00
Ash, Geo. T..... Clerk, at \$1,000..... 1,000.00	1 charwoman or laborer..... 480.00	1 messenger, messenger boy, or laborer (change of title submitted)..... 480.00
Hodge, Frederic E..... Clerk, at \$1,000..... 1,000.00	1 messenger boy..... 360.00	1 laborer..... 600.00
Hutchins, W. A..... Clerk, at \$1,000..... 1,000.00		1 laborer..... 300.00
Sturgis, A. G..... Clerk, at \$1,000..... 1,000.00		1 charwoman or laborer..... 480.00
Haygood, Serena..... Clerk, at \$840..... 840.00		
Howe, Sarah W..... Clerk, at \$840..... 835.33		
Pevare, John F..... Clerk, at \$840..... 840.00		
Elsner, E. C..... Carpenter, at \$840..... 840.00		
Bonde, R. J..... Photographer, at \$1,200..... 1,200.00		
Bresnahan, M..... Messenger, at \$720..... 720.00		
King, Chas. W..... Laborer, at \$480..... 480.00		
Williams, E. A..... Laborer, at \$600..... 600.00		
Brown, M. L..... Charwoman, at \$480..... 480.00		
Masi, J. W..... Messenger boy, at \$360..... 360.00		
Total..... 35,412.64	Total amount of above appropriation (an increase over 1910 of \$1,920)..... 37,420.00	Total amount estimated (an apparent increase over 1911 of \$14,600)..... 52,020.00
Unexpended balance..... 87.36		
Total amount of above appropriation..... 35,500.00		
NOTE.—An increase of \$14,600 is submitted. Of this sum \$6,400 covers the transfer of four employees from the lump fund for General Expenses, which fund has been reduced accordingly. \$7,200 is to provide for five new places, and \$1,000 is for promotion of the chief of bureau, which is well deserved, and will make his salary more nearly agree with the salaries of chiefs of other bureaus in the departmental service. The changes in detail are as follows:		
Transfers from lump fund for general expenses:		
2 employees from Soil Survey..... 3,200.00		
1 employee from Administrative Expenses..... 1,800.00		
1 employee from Soil Laboratory Investigations..... 1,400.00		
Promotions:		
1 chief of bureau..... 1,000.00		
New places:		
1 clerk, class 4..... 1,800.00		
1 clerk, class 3..... 1,600.00		
1 clerk, class 2..... 1,400.00		
1 clerk, class 1..... 1,200.00		
1 draftsman..... 1,200.00		
14,600.00		
The above force will perform the following duties:		
Administration and supervision:		
Chief of bureau..... \$4,500.00		
Chief clerk..... 2,000.00		
2 clerks, class 1..... 2,400.00		
8,900.00		
Records and correspondence:		
1 clerk, class 3..... \$1,600.00		
1 bibliographer..... 1,400.00		
2 clerks, class 2..... 2,800.00		
3 clerks, class 1..... 3,600.00		
3 clerks, at \$1,000..... 3,000.00		
2 clerks, at \$840..... 1,680.00		
14,080.00		
The above force performed the following duties:		
Administration and supervision:		
Chief of bureau..... \$3,500.00		
Chief clerk..... 2,000.00		
2 clerks, class 1..... 2,400.00		
7,900.00		
Records and correspondence:		
1 clerk, class 2..... \$1,400.00		
1 clerk..... 1,260.00		
2 clerks, class 1..... 2,400.00		
3 clerks, at \$1,000..... 3,000.00		
2 clerks, at \$840..... 1,680.00		
9,740.00		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Soils, 1910, \$35,500—Continued.</i>		
Field records and map section:	Field records and map section:	Field records and map section:
1 clerk, class 4..... \$1,800.00	1 clerk, class 4..... \$1,800.00	1 executive assistant..... \$2,000.00
1 clerk, class 1..... 1,200.00	1 photographer..... 1,200.00	1 clerk, class 4..... 1,800.00
1 photographer..... 1,200.00	1 draftsman..... 1,200.00	1 photographer..... 1,200.00
1 draftsman..... 1,200.00	1 draftsman..... 1,000.00	3 draftsmen, at \$1,200..... 3,600.00
1 draftsman..... 1,000.00	2 clerks, class 1..... 2,400.00	1 draftsman..... 1,000.00
1 clerk..... 840.00	1 clerk..... 840.00	2 clerks, class 1..... 2,400.00
\$7,240.00	\$8,440.00	1 clerk..... 840.00
Editorial section:	Editorial section:	Editorial section:
1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
2 clerks, class 2..... 2,786.38	2 clerks, class 2..... 2,800.00	1 clerk, class 3..... 1,600.00
1 clerk..... 1,000.00	1 clerk..... 1,000.00	2 clerks, class 2..... 2,800.00
5,586.38	5,600.00	1 clerk..... 1,000.00
Accounts:	Accounts:	Accounts:
1 clerk, class 3..... 1,560.00	1 clerk, class 3..... 1,600.00	1 clerk, class 4..... 1,800.00
Property records:	Property records:	Property records:
1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00
Messengers, carpenter, laborers, charwoman, etc.:	Messengers, carpenter, laborers, charwoman, etc.:	Messengers, carpenter, laborers, charwoman, etc.:
1 messenger..... \$720.00	1 messenger..... \$720.00	1 messenger..... \$720.00
1 carpenter..... 840.00	1 laborer..... 480.00	1 laborer..... 480.00
1 laborer..... 480.00	1 laborer..... 600.00	1 messenger boy..... 360.00
1 laborer..... 600.00	1 charwoman..... 480.00	1 laborer..... 600.00
1 charwoman..... 480.00	1 laborer..... 300.00	1 laborer..... 300.00
1 messenger boy..... 360.00	1 messenger boy..... 300.00	1 charwoman..... 480.00
3,480.00	2,940.00	2,940.00
Total..... 35,412.64	Total appropriation..... 37,420.00	Total amount estimated..... 52,020.00
Balance to be turned back into Treasury..... 87.36		
Total amount of appropriation..... 35,500.00		
<i>General expenses, Bureau of Soils, 1910 (soil laboratory investigations), \$48,500. (Original subappropriation of \$48,000 increased by transfer of \$500 from soil water investigations.)</i>	<i>General expenses, Bureau of Soils, 1911 (soil laboratory investigations), \$48,000.</i>	<i>General expenses, Bureau of Soils, 1912 (soil laboratory investigations), \$51,600.</i>
Lump fund salaries (In Washington..... \$43,565.02 Out of Washington..... 15.77)	Lump fund salaries (In Washington..... \$43,800.00 Out of Washington..... )	Lump fund salaries (In Washington..... \$46,600.00 Out of Washington..... )
Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,351.56	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,400.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,500.00
Freight..... 5.00	Apparatus, instruments, and laboratory material..... 2,300.00	Apparatus, instruments, and laboratory material..... 2,500.00
Apparatus, instruments, and laboratory material..... 2,308.21	Travel and station and field expenses..... 500.00	Travel and station and field expenses..... 1,000.00
Travel and station and field expenses..... 1,136.78		
Total expenditures to Aug. 31, 1910..... 48,382.34	Total amount of appropriation..... 48,000.00	Total amount estimated (an apparent increase over 1911 of \$3,600)..... 51,600.00
Total amount of appropriation..... 48,500.00		
Total expenditures under above groups..... 48,382.34		
Unexpended balance on Aug. 31, 1910..... 117.66		
Repayments to credit of appropriation..... 229.95		
Net unexpended balance..... 347.61		
Outstanding liabilities (estimated)..... 328.00		
Balance to be turned back in Treasury (estimated)..... 19.61		
NOTE.—The above expenditures, classified in accordance with the suggestion of the Congressional Committee on Expenditures for this department, where necessary in prosecuting the important work of the Bureau of Soils. This work fell naturally under the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the Congressional Committee on Expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Soils. This work falls naturally under the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the Congressional Committee on Expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Soils. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
Physical and chemical investigations..... 28,178.97	Physical and chemical investigations..... 27,695.00	Physical and chemical investigations..... 29,400.00
The laboratories furnish the physical and chemical data necessary for the interpretation of the field studies of the bureau. The amount of analytical work thus required has continued to increase with the growing requirements of the field investigations, augmented by increasing demands for such data from other bureaus and offices. Certain fundamental investigations have been conducted called for by the problems in the field work and necessary to the understanding of the handling of the soils and fertilizers.		The volume of work required of the soil laboratories has grown greatly in the past few years and can no longer be met with the present appropriation. The demand for analytical data regarding soils by the field employees of this bureau, by other bureaus of the department, by other departments, State authorities who are cooperating with this bureau, other organizations, and individuals, has at least doubled during

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
General expenses, Bureau of Soils, 1910 (soil laboratory investigations), \$48,500. (Original subappropriation of \$48,000 increased by transfer of \$500 from soil water investigations)—Continued.	General expenses, Bureau of Soils, 1911 (soil laboratory investigations), \$48,000—Continued.	General expenses, Bureau of Soils, 1912 (soil laboratory investigations), \$51,600—Continued.
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Physical soil investigations..... \$9,969.54	Physical soil investigations..... \$10,000.00	Physical soil investigations..... \$10,000.00
<p>(a) Conservation of soil moisture. The object of this investigation was to determine the loss of water by evaporation from various soil types with different sorts of mulches, and under different physical conditions, due to different cultural methods, with a view to devising the best method of conserving the soil moisture in semiarid regions.</p> <p>(b) Relation of soil moisture to physical condition of soils. The object of this investigation was to determine the effect of various moisture conditions upon the practical handling of the soil, with a view of putting it in the best condition for plant growth.</p> <p>(c) Flocculation, sedimentation, and erosion of soils. The object is to study soil erosion and methods for its prevention. The physical character of the soil is of prime importance in an investigation of the extent and rate of erosion, and a study of the physical condition and structure of soil is necessary to a complete understanding of the influence of organic and mineral fertilizers in promoting flocculation and sedimentation of various soil types.</p> <p>(d) Absorption of vapors and gases by soils. The object of this investigation was to determine the ability of different soil types to condense on the surface of the grains water vapor and other gases present in the soil atmosphere, especially the gaseous products of the decomposition of organic matter.</p> <p>(e) Retention and conservation of fertilizer ingredients by soils. This investigation had for its object the determination of the ability of different soil types to absorb the substance commonly employed in fertilizer practice. It has been shown that different soils possess widely different absorptive powers for the various fertilizer ingredients. The fact that there is this absorption is of the utmost importance in conserving for future use the excess of plant nutrients.</p> <p>(f) Leaching of soils. The rate of removal of plant food and other constituents from humid soils, and of the excess of soluble salts from the alkali soils has been made the object of examination. The composition of drainage waters at successive stages of reclamation have indicated that much longer periods are necessary to remove some of the harmful ingredients than others, and that this leaching influences the physical structure of the soil. The different soil types are leached at very different rates, depending upon the texture, amount of organic matter, etc.</p> <p>(g) Wind movement of soils. The object of this investigation is to determine the extent of translocation of soil material by æolian agencies. It has been shown that the wind carries soil materials for hundreds and even thousands of miles, and at the place of precipitation of the soil material very great changes occur in the soil conditions. The wind is the most important agency in mixing the various rock-forming minerals in the soil.</p> <p>(h) Soil temperatures. The object of this work was to determine the power of various soils to transmit heat and the influence of the moisture condition on this heat transmission. It has been found that a dry soil conducts heat very much slower than one moderately moist. This throws light upon the condition known by agriculturists as the "optimum moisture condition," the use of flooding in cranberry culture and similar crops, the choice of time for plowing, etc.</p> <p>(i) Investigation of routine methods of analysis. Improving and shortening methods for estimating the physical properties of soils, such as texture, porosity, etc. Inventing, constructing, and testing of apparatus to these ends.</p> <p>(j) Physical properties of alkali soils. Modifications of usual properties induced by the presence of different types of alkali, and new properties brought about by special kinds of alkali.</p> <p>(k) Nature of hardpans. Hardness, porosity, penetrability, and properties of an agronomic significance.</p> <p>(l) Effect of flood waters, winds, and other natural agencies on the accumulation and segregation of the rock forming minerals, and their degradation and decomposition products in soils.</p>		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil laboratory investigations), \$48,500. (Original subappropriation of \$48,000 increased by transfer of \$500 from soil water investigations)—Continued.</i>	<i>General expenses, Bureau of Soils, 1911 (soil laboratory investigations), \$48,000—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil laboratory investigations), \$51,600—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Chemical investigations..... \$6,844.08	Chemical investigations..... \$6,750.00	Chemical investigations..... \$8,000.00
Including:		
(a) Phosphates of soils and fertilizers. The object of this investigation was to obtain more definite knowledge of the phosphates of soils and fertilizers, with special reference to their chemical character and chemical interactions which take place when phosphate fertilizers are added to the soil, with a view of explaining many observed phenomena of fertilizer practice and to suggest the kind of phosphate best adapted to any particular soil type.		
(b) Nitrogen carrying fertilizers. The object of this investigation was to obtain more definite information regarding the amount and nature of nitrogen in various fertilizing materials, such as lime-nitrogen, cyanamid, sodium nitrate, etc.		
(c) Chemical and mineralogical composition of soil separates. The object of this study is to separate the soil into fractions according to the size of the particles, and to determine the chemical and mineralogical composition of the various separations of the different soil types. It was shown that there is a larger percentage of the mineral nutrients in the smaller grains, but that these mineral nutrients as well as the minerals from which they were derived are scattered through the grains of all sizes. The solution of these minerals in the soil moisture supply the plant with its required nutrients.		
(d) Solubility of soil minerals. The object of this work is to investigate the rate at which different sized soil grains and different soil minerals dissolve in the soil moisture to supply growing crops with their needed nutrients.		
(e) Chemical properties of humus. Of all the soil constituents probably more has been written about humus than any of the other constituents. In spite of this, probably less has been definitely established than about any of the other constituents. The object of this work is therefore to clear up some of the contradictory views regarding humus and to find in what way it reacts upon the other materials of the soil, and affects both the physical and chemical properties of the soil.		
(f) Iron compounds of the soil. The object of this investigation is to determine whether the relative productive power of soils is due to the nature of the iron compounds in the red and yellow soils, or whether these colors are merely indicative of present or past conditions controlling not only the color of the iron compounds, but also other factors which are directly responsible for productivity.		
(g) Alkali soils. The object of this work is to determine the nature and composition of the harmful salts contained in alkali soils, and of the irrigation and drainage waters from the soils, in order to aid the field parties in the reclamation of these soils, and to give information which will be of value in adopting suitable methods of reclamation and to assist in the selection of crops most resistant to the different kinds of alkali salts and to different combinations of these salts.		
(h) Investigation of routine methods of analysis. The object of this work is to devise and perfect the methods of physical and chemical analysis, so as to attain greater accuracy and speed, made necessary by the increasing amount of work and the increased demand for more detailed knowledge in solving soil problems.		
(i) Field demonstration. The object of this work is to demonstrate certain laboratory results in the field.		
(j) Nature of hardpans. Their chemical constitution; how they are formed, and how they are disintegrated by weathering and by cultural methods.		
Unclassified analytical work..... 9,202.27	Unclassified analytical work..... 9,000.00	Unclassified analytical work..... 9,400.00
This work comprises the analysis of miscellaneous samples of soils, fertilizers, irrigation and drainage waters, etc. There is always a certain amount of such miscellaneous work sent in by the field parties of the bureau, and other bureaus and departments, and these analyses throw more or less light upon specific soil conditions.		
Designing and repairing apparatus for field and laboratory studies..... 2,163.08	Designing and repairing apparatus for field and laboratory studies..... 1,945.00	Designing and repairing apparatus for field and laboratory studies..... 2,000.00
The laboratory investigations of the physical and chemical properties of soils and the field tests require special apparatus designed and constructed under the immediate supervision of the men engaged in the work.		
Soil fertility investigations..... 20,531.37	Soil fertility investigations..... 20,305.00	Soil fertility investigations..... 22,200.00
Investigations of the causes of, and remedy for, infertility in certain soils and of the low crop yields arising in many soils from improper methods of cultivation and cropping; the separation, identification, and study of organic substances found in unproductive soils, and their correction by mechanical handling, by use of fertilizers, and by other methods available to the farmer.		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil laboratory investigations), \$48,500. (Original subappropriation of \$48,000 increased by transfer of \$500 from soil water investigations)—Continued.</i>	<i>General expenses, Bureau of Soils, 1911 (soil laboratory investigations), \$48,000—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil laboratory investigations), \$51,600—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Investigation of the maintenance of soil fertility..... \$3,001.73 This project is to investigate the permanency of soil fertility of the important soil types of the United States, with a view to avoid soil deterioration by improper methods of cultivation and cropping. Especial attention has been paid to the staple crops—corn, wheat, oats, potatoes, etc.—which are proving to have very injurious effects on the soil when continually grown on the same land. In laboratory investigations the nature of the soils are being studied, with a view to determine the effect of these crops upon the various factors which influence soil productivity. By a proper understanding of these factors in the laboratory and in the field, the best systems of soil management and crop rotation will be devised for successful agriculture on the various soil types.	Investigation of the maintenance of soil fertility..... \$3,060.00	Investigation of the maintenance of soil fertility..... \$3,860.00
Investigation of the causes of unproductive soils..... 4,100.00 This project is to determine in the soils the causes or factors of low crop production. The deterioration of soils results from various conditions, such as poor drainage and aeration, and from poor cultivation, improper succession of crops, or improper crop adaptation. It has already been shown that the poor qualities of unproductive soils are not always due to a lack of mineral plant food, but often to the presence of substances actually hindering plant growth. Extended investigations have been carried on with infertile soils in determining the presence of toxic bodies, in isolating and identifying these bodies, and in studying their properties. The toxic bodies found are carbon compounds, and it has been shown that the productiveness of a soil depends largely upon the condition of the organic matter in the soil and the processes which are at work in destroying the plant remains. The properties of these and related compounds in soils have been studied with reference to their effect on plant growth and much valuable information obtained concerning the processes of decay of organic matter in soils.	Investigation of the causes of unproductive soils..... 4,200.00	Investigation of the causes of unproductive soils..... 4,450.00
Investigation of the organic origin of unproductivity in soils and the effect of green manuring..... 3,816.67 The origin of the toxic substances and the conditions which lead to their formation have been investigated; namely, whether they are formed by the accumulation of root excreta in the soil under a one-crop system, where they are not taken care of by natural process of destruction and decay, due to improper drainage, aeration, or cultivation; whether they are the products of germination, of bacteria or other life processes within the soil; or whether they are formed by the decomposition of vegetable matter under unfavorable conditions in the soil. The effects of green and stable manuring and the products of their decomposition in the soil have been studied to determine the manner of and relative effectiveness in overcoming unfavorable conditions in soils.	Investigation of the organic origin of unproductivity in soils and the effect of green manuring.... 3,865.00	Investigation of the organic origin of unproductivity in soils and the effect of green manuring..... 3,765.00
Investigation of means for improvement of unproductive soils..... 2,955.00 The object of this line of investigations has been the determination of the conditions and treatment necessary to attack or destroy unfavorable organic materials in the soil, rendering them harmless to crops. Among these has been the action of fertilizers; the action of plant roots; the effect of cultivation with its resulting aeration and oxidation, and also the influence of crop rotation and the action of substances not regarded as furnishing plant foods. Attention is also being paid to the remedy of conditions which cause the formation of these unfavorable bodies.	Investigation of means for improvement of unproductive soils..... 2,955.00	Investigation of means for improvement of unproductive soils..... 3,300.00
Investigation of the effect of fertilizers on soils..... 3,134.73 The object of this work is to determine the function of fertilizers in various soil types and crops. It has already been demonstrated that substances commonly used as fertilizers have, in addition to their functions as plant nutrients, a well-defined power to overcome and destroy harmful bodies in the soil—facts of distinct value in the study of soil and fertilizer problems. This investigation includes the time and mode of action of fertilizers on harmful soil constituents, the best time of application, the proportions of the fertilizing constituents, and the effect of fertilizers under different climatic conditions and with different crops, with a view to establishing the best systems of fertilization consistent with economy.	Investigation of the effect of fertilizers on soils..... 3,440.00	Investigation of the effect of fertilizers on soils..... 3,440.00
Field investigations of soil fertility problems in cooperation with experiment stations..... 1,847.53 Cooperation has been arranged with a number of the experiment stations to investigate local cases of infertile soils, or of soil deterioration, by fertilizer field experiments and laboratory investigations, including soil studies in connection with long-continued fertilizer and rotation experiments.	Field investigations of soil fertility problems in cooperation with experiment stations..... 1,900.00	Field investigations of soil fertility problems in cooperation with experiment stations..... 2,200.00
General field and laboratory supplies..... 1,675.71	General field and laboratory supplies..... 885.00	General field and laboratory supplies..... 1,185.00

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil water investigations), \$4,500. (Original subappropriation of \$5,000 decreased by transfer of \$500 to soil laboratory investigations.)</i>	<i>General expenses, Bureau of Soils, 1911 (soil water investigations), \$5,000.</i>	<i>General expenses, Bureau of Soils, 1912 (soil water investigations), \$5,000.</i>
Lump-fund salaries in Washington..... \$3,000.00	Lump-fund salaries in Washington..... \$3,600.00	Lump-fund salaries in Washington..... \$3,600.00
Stationery..... 110.72	Stationery..... 125.00	Stationery..... 125.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 165.46	Miscellaneous supplies and services, equipment, books, machinery, etc..... 375.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 375.00
Furniture..... 306.18	Furniture..... 100.00	Furniture..... 100.00
Travel and station and field expenses..... 720.22	Travel and station and field expenses..... 800.00	Travel and station and field expenses..... 800.00
Total expenditures to August 31, 1910..... 4,302.58	Total amount of appropriation..... 5,000.00	Total amount estimated.. 5,000.00
Total amount of appropriation..... 4,500.00		
Total expenditures under above groups..... 4,302.58		
Unexpended balance on August 31, 1910..... 197.42		
Outstanding liabilities (estimated)..... 0.00		
Balance to be turned back in Treasury (estimated)..... 197.42		
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, where necessary in prosecuting the important work of the Bureau of Soils. This work fell naturally under the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Soils. This work falls naturally under the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Soils. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
Soil water investigations..... 4,302.58	Soil water investigations..... 5,000.00	Soil water investigations..... 5,000.00
This project has for its object the investigations of the extent of damage arising from the erosion of cultivated soils, and the most practical remedial measures for checking the same. It is, in effect, to study the reasons of and remedies for one of the most important causes of the loss of soil fertility. To it may be charged the wasting of wide areas of the arable soils of the United States, and the evil does not end there, for the products of erosion prove a source of menace to, and interference with, the navigation of the waterways of the country. Desultory efforts have been made, through various methods of treatment, to serve the soils and prevent this waste, but it is now proposed that a systematic study should be made of different soils and of practical methods of preventing their bodily removal from the fields.		
Reconnaissance study of the effect of erosion of agricultural lands..... 3,720.22	Reconnaissance study of the effect of erosion of agricultural lands.. 4,400.00	Reconnaissance study of the effect of erosion of agricultural lands..... 4,400.00
Stationery, furniture, typewriter, and miscellaneous supplies, etc..... 582.36	Stationery, furniture, typewriter, and miscellaneous supplies, etc..... 600.00	Stationery, furniture, typewriter, and miscellaneous supplies, etc..... 600.00
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), \$135,160.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960.</i>
Lump-fund salaries:	Lump-fund salaries:	Lump-fund salaries:
In Washington..... \$22,385.01	In Washington..... \$20,000.00	In Washington..... \$25,000.00
Outside of Washington..... 59,949.29	Outside of Washington..... 61,000.00	Outside of Washington..... 75,000.00
Stationery..... 209.09	Stationery..... 150.00	Stationery..... 150.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 784.28	Miscellaneous supplies and services, equipment, books, machinery, etc..... 500.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 500.00
Apparatus, instruments, and laboratory material..... 1,069.21	Apparatus, instruments, and laboratory material..... 500.00	Apparatus, instruments, and laboratory material..... 500.00
Travel and station and field expenses..... 52,040.83	Travel and station and field expenses..... 53,010.00	Travel and station and field expenses..... 65,810.00
Total expenditures to Aug. 31, 1910..... 136,437.71	Total amount of appropriation (a decrease over 1910 of \$2,200)..... 135,160.00	Total amount estimated (an apparent increase over 1911 of \$31,800)..... 166,960.00
Total amount of appropriation..... 137,360.00		
Total expenditures under above groups..... 136,437.71		
Unexpended balance on Aug. 31, 1910..... 922.29		
Outstanding liabilities (estimated)..... 416.51		
Balance to be turned back in Treasury (estimated)..... 505.78		
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of soils. This work fell naturally under the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Soils. This work falls naturally under the following projects:	NOTE.—One executive assistant at \$2,000 and one draftsman at \$1,200 now carried on the soil survey roll have been transferred to the statutory roll, which makes a net increase over 1911 of \$35,000. NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Soils. This work will fall naturally under the following projects:

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Contd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), \$135,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960—Continued.</i>
PROJECTS.	PROJECTS.	PROJECTS.
Soil survey..... \$136,854.22	Soil survey..... \$135,160.00	Soil survey..... \$166,960.00
This work comprises the surveying, both upon a detailed and reconnaissance basis, the mapping, and the classifying of the soils of important areas in various parts of the country, and the preparing of reports containing descriptive matter relating to the different soils, their character, origin, and value for crops, and of the agricultural conditions found in each area surveyed. The maps show the distribution of the different soils and the reports accompanying the maps describe these soils. Any unusual features observed in the field or shown by the analyses, the particular adaptation of certain types of soil to particular crops, desirable changes in the methods of cultivation or fertilizer practice are pointed out. The work of the soil survey is planned along lines so complete and at the same time so practical that the reports and maps are used not only by the landowners themselves in improving the methods of cultivation and crop rotation, but also by real estate firms in selling property, by State immigration officers, and by prospective purchasers generally. The mapping and classifying of the soils of the United States is also furnishing valuable basic information, which is coming to be used more and more by investigators in all lines of agricultural research. Requests are received annually for about 20,000 copies of these maps and reports. The base maps which show the roads, streams, houses, and township boundaries are furnished by the Geological Survey, or where their surveys have not extended, are secured from official records of Government and county officers, or from such other sources as may be available.		The requests for additional soil survey work during the last three years have increased about 47 per cent annually, the increase during the last year amounting to approximately 50 per cent. These requests come from State legislatures, who are appropriating or propose to appropriate money to cooperate with and support the soil surveys by appropriate State agencies; from Federal bureaus who require the soil surveys as a basis for the best prosecution of many of their own projects; from boards of trade; from chambers of commerce of cities located in prominent agricultural districts; from large development companies; from railroads to aid in their development work; from horticultural societies; and from citizens in different parts of the country. During the fiscal year 1910 surveys were completed or begun in 84 different areas, located in 31 different States, covering an area of 101,871 square miles. The surveys were assigned to these areas to meet the requirements of the most urgent requests on file in the Bureau of Soils, and at the same time to extend the general knowledge of the soils of the principal agricultural regions of the United States. In locating these surveys the bureau has also kept in mind the desirability of securing as early as possible a general knowledge of the soil conditions of all parts of the country. With no increase in appropriation, and at the present rate of progress in the field work, it would take fully 10 years to survey the areas for which requests are now on file, saying nothing of the applications that are received from year to year. Provision should be made enabling the bureau to at least double the work each year during the next few years.
The following areas were surveyed in whole or in part during the fiscal year 1910:		
<i>Detailed surveys.</i>	<i>Detailed surveys.</i>	<i>Detailed surveys.</i>
Alabama:	Alabama:	Alabama:
Baldwin County..... 2,466.99	The soil survey work in this State is carried on in cooperation with the Alabama State department of agriculture, the State furnishing assistants and assuming expenses in an amount approximately equal to that paid by the bureau. The following areas have been begun or will be assigned during the fiscal year 1911:	The soil-survey work now being carried on in cooperation with the State of Alabama should be continued during the fiscal year 1912, and at least \$8,000 should be made available for its prosecution. The surveys to be undertaken will be selected after conference between the Chief of the Bureau of Soils and the commissioner of agriculture of that State, subject to the approval of the Secretary of Agriculture.
Area begun during previous fiscal year and completed Feb. 3, 1910.	Jackson County.	
Chambers County..... 1,217.83	Mobile County.	
Clarke County..... 1,441.74	Pike County.	
Coffee County..... 1,288.15	Randolph County.	
Area begun during previous fiscal year and completed Dec. 2, 1909.	Tuscaloosa County.	
Dale County..... 1,530.16	Upon the completion of these areas other areas will be taken up after consultation with the State commissioner of agriculture. Approximately \$8,000 will be expended by the Bureau of Soils in the prosecution of soil-survey work in this State during the fiscal year 1911.	
Hale County..... 294.19		
Area begun during previous fiscal year and completed Aug. 4, 1909.		
Jackson County..... 922.32		
Area will be completed during fiscal year 1911.		
Mobile County..... 1,175.89		
Pike County..... 1,172.56		
Area begun Feb. 4, 1910, and will be completed during fiscal year 1911.		
Tallapoosa County..... 192.11		
Area completed July 28, 1909, balance of area having been surveyed during previous fiscal year.		
Tuscaloosa County..... 2,775.10		
Area begun Dec. 15, 1909, and will be completed during fiscal year 1911.		
	Arkansas:	Arkansas:
	It is hoped that a survey of Pulaski County may be made during the fiscal year 1911, and at least one other area begun, at an estimated cost of \$3,500.	Not less than \$2,500 should be made available for an additional survey in this State during the fiscal year 1912.
California:	California:	California:
Livermore area..... 2,041.39	The Red Bluff area will be completed during the fiscal year 1911, and the survey of a portion of the San Joaquin Valley in Fresno County has been assigned for the winter season. It is estimated that this work will require not less than \$5,000.	Not less than \$5,000 should be made available for detailed soil surveys in the State of California during the fiscal year 1912. Areas should be undertaken at the earliest possible date in the smaller valleys along the Pacific coast. Additional work should be undertaken in the Great Central Valley and in the fruit-growing sections which are being rapidly developed.
Madera area..... 6,380.75		
Marysville area..... 150.30		
Cost of completing that portion of area left unsurveyed during previous fiscal year on account of high water.		
Red Bluff area..... 604.16		
Area begun May 25, 1910, and will be completed during fiscal year 1911.		
Colorado:	Colorado:	
Uncompahgre Valley area..... 582.27	A detailed survey of a portion of the Uncompahgre Valley begun last fiscal year will be completed during the fiscal year 1911 at an estimated cost of \$3,500.	
Area begun May 20, 1910, and will be completed during fiscal year 1911.		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Cont'd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), \$135,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Detailed surveys—Continued.	Detailed surveys—Continued.	Detailed surveys—Continued.
Connecticut: Windham County..... \$34. 89 Area begun June 28, 1910, and will be completed during fiscal year 1911.	Connecticut: The survey of Windham County will be completed during the fiscal year of 1911 at an estimated cost of \$2,000.	Connecticut: At least \$2,000 should be used for the continuation of detailed soil survey work in this State during the fiscal year 1912.
Florida: Jacksonville area..... 2, 942. 05		Delaware: Not less than \$2,000 should be set aside for the completion of the soil survey of the State of Delaware during the fiscal year 1912. This work is urgently requested by the officers of the State Grange, and by the State commissioner of agriculture.
Georgia: Bulloch County..... 4, 628. 30 Franklin County..... 929. 26 Sumter County..... 2, 860. 28	Georgia: The survey of Walker County has been assigned and will be completed during the fiscal year 1911. Additional work will be taken up in Chatham, Columbia, and Glynn Counties and it is estimated that the sum of \$4,500 will be required for the prosecution of this work during the fiscal year 1911.	Florida: Not less than \$3,500 should be made available for additional detailed soil survey work in this State during the fiscal year 1912.
		Georgia: Not less than \$4,500 should be expended in this State during the fiscal year 1912 for additional surveys in counties where agricultural high schools are located, and in the adjoining counties, with a view of aiding the development of their agricultural resources.
		Idaho: Additional work should be undertaken in the southern portion of this State, especially in the irrigated sections, and not less than \$2,000 should be made available during the fiscal year 1912.
		Indiana: The survey of at least one area should be undertaken in this State to aid in the development of more specialized and intensive forms of agriculture. Not less than \$2,500 should be made available for the prosecution of the work during the fiscal year 1912.
	Iowa: Urgent requests are on file for the survey of Pottawattamie County, and if the finances of the bureau will permit this area should be undertaken with the opening of the spring field season. Not less than \$2,500 should be made available for that purpose.	Iowa: It is highly desirable that additional detailed work shall be undertaken in this State, and at least \$3,000 should be made available for that purpose during the fiscal year 1912.
Kentucky: Rockcastle County..... 927. 92 Area begun Oct. 21, 1909. Work was temporarily suspended Dec. 14, 1909, and resumed on May 15, 1910. Area will be completed during fiscal year 1911.	Kentucky: The survey of Rockcastle County will be completed during the fiscal year 1911. It is hoped that an additional area in the tobacco producing districts may be undertaken before the close of this fiscal year. At least \$3,000 should be set aside for this work.	Kentucky: Not less than \$2,500 should be made available for additional soil survey work in this State during the fiscal year 1912 in order to meet the urgent demands for the survey of areas in tobacco-producing districts in the western portion of the State.
Louisiana: Concordia Parish..... 2, 823. 95 Lincoln Parish..... 336. 04 Area completed July 24, 1909, balance of area having been surveyed during previous fiscal year.	Louisiana: The survey of Iberia Parish has been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$3,000.	Louisiana: Additional soil work should be taken up in the sugar and cotton producing districts. Urgent requests bearing the indorsement of the State agricultural authorities are on file requesting that additional soil-survey work shall be undertaken in different sections of the State. Not less than \$3,000 should be made available for the prosecution of this work during the fiscal year 1912.
Maine: Orono area..... 1, 099. 04		Maine: Additional areas should be surveyed in the southern portion of this State to aid in the reoccupation of the agricultural lands and the development of the agricultural resources of these sections. During the fiscal year 1912 not less than \$2,000 should be devoted to this work, which has been requested by the State agricultural authorities and others.
Maryland: Anne Arundel County..... 1, 197. 37 Area completed Sept. 19, 1909, balance of area having been surveyed during previous fiscal year.	Maryland: Urgent requests are on file for the survey of Baltimore County and not less than \$3,000 should be made available for this work during the fiscal year 1911.	Maryland: Not less than \$3,000 should be made available for the survey of additional areas in the State of Maryland during the fiscal year 1912.
	Massachusetts: The survey of Plymouth County has been assigned and will be completed during the fiscal year 1911. Requests are on file from the Massachusetts Agricultural College authorities and others for the survey of Barnstable County. If the finances of the bureau will permit this survey should be made and at least \$3,000 made available for the work.	Massachusetts: Not less than \$3,500 should be made available for additional soil-survey work in the State of Massachusetts during the fiscal year 1912.

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Cont'd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey) \$135,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960—Continued.</i>
PROJECTS—continued. Detailed surveys—Continued.	PROJECTS—continued. Detailed surveys—Continued.	PROJECTS—continued. Detailed surveys—Continued.
	Michigan: Not less than \$2,500 should be made available for a detailed survey in the cut-over pine regions of this State to aid in the agricultural development.	Michigan: Previous surveys made in this State show conclusively that large areas of the cut-over timber lands located in the southern peninsula are suitable for profitable agriculture. Not less than \$3,460 should be made available for additional work in this State during the fiscal year 1912, to aid in the development of agricultural resources of that section.
Minnesota: Rice County..... \$2,402.32	Minnesota: To further the agricultural interests in this State it is hoped that at least one area may be undertaken with the opening of the spring field season, and that the sum of \$2,000 may be set aside for that purpose.	
Mississippi: Adams County..... 1,437.29 Noxubee County..... 2,541.85	Mississippi: The survey of Lauderdale County has been assigned and will be completed during the fiscal year 1911. Additional work will be undertaken in Forrest, Lowndes, and Wayne counties, and it is estimated that at least \$4,000 will be required for the prosecution of the work during this fiscal year.	Mississippi: Soil-survey work in this State is carried on in cooperation with the Mississippi geological survey. Not less than \$3,500 should be made available for the prosecution of this work during the fiscal year 1912. Areas to be surveyed will be selected after consultation between the Chief of the Bureau of Soils and the State authorities, subject to the approval of the Secretary of Agriculture.
Missouri: Atchison County..... 683.55 Soil survey work in the State of Missouri is carried on in cooperation with the Missouri State Department of Agriculture, the State furnishing assistants and assuming approximately one-half of the field expenses.	Missouri: The survey of Cape Girardeau and Jackson counties will be completed during the fiscal year 1911. Additional work will be undertaken in Pemiscot, Marion, and Washington counties, and not less than \$4,000 should be made available for these assignments during the fiscal year 1911.	Missouri: In order that the cooperative soil-survey work now being carried on between this bureau and the Missouri State Department of Agriculture may be continued, not less than \$5,000 should be made available during the fiscal year 1912. The areas to be surveyed will be selected after consultation between the Chief of the Bureau of Soils and the State authorities, subject to the approval of the Secretary of Agriculture.
Cape Girardeau County..... 71.60 Area begun June 2, 1910, and will be completed during fiscal year 1911.		
Cedar County..... 1,145.35 Area begun during previous fiscal year and completed Nov. 18, 1909.		
Cooper County..... 1,700.78 Area begun during previous fiscal year and completed Feb. 28, 1910.		
Jackson County..... 800.52 Area begun April 12, 1910, and will be completed during fiscal year 1911.		
Marion County..... 322.40 Area begun May 24, 1910, and will be completed during fiscal year 1911.		
Pemiscot County..... 768.04 Field work was temporarily suspended Jan. 4, 1910, and resumed Oct. 15, 1910. Area will be completed during fiscal year 1911.		
Washington County..... 249.69 Field work was temporarily suspended Dec. 30, 1909. Area will be completed during fiscal year 1911.		
Nevada: Fallon area..... 1,778.71		
New Hampshire: Nashua area..... 1,680.28		New Hampshire: Not less than \$2,500 should be made available for soil survey work in the State of New Hampshire during the fiscal year 1912.
New Jersey: Sussex County..... 1,623.88 Field work was temporarily suspended Dec. 31, 1909, and resumed June 1, 1910. Area will be completed during fiscal year 1911.	New Jersey: The survey of Sussex and Vineland areas will be completed during the fiscal year 1911. Upon the completion of these areas it is hoped that other assignments may be made and at least \$2,000 set aside for the work.	New Jersey: The soil survey work in the State of New Jersey is carried on in cooperation with the New Jersey Agricultural Experiment Station and the New Jersey Geological Survey, and in order properly to carry on this cooperative work during the fiscal year 1912, not less than \$2,500 should be made available.
Vineland area..... 568.79 Field work was temporarily suspended May 30, 1910. Area will be completed during fiscal year 1911.		New Mexico: At least \$2,500 should be made available for a detailed soil survey of the Elephant Butte reclamation project during the fiscal year 1912.
New York: Ontario County..... 2,327.36 Field work was temporarily suspended Nov. 23, 1909, and resumed May 9, 1910. Area will be completed during fiscal year 1911.	New York: The survey of Monroe and Ontario Counties now in progress will be completed during the current year, and other areas will be undertaken with the opening of the spring field season. It is estimated that not more than \$4,000 will be expended in this State during the fiscal year 1911.	New York: Soil survey work in this State is carried on in cooperation with the New York State College of Agriculture. Not less than \$5,500 will be needed for the proper prosecution of the work during the fiscal year 1912.
Washington County..... 1,629.31 Area begun during previous fiscal year and completed Sept. 30, 1909.		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Cont'd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), \$135,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Detailed surveys—Continued.	Detailed surveys—Continued.	Detailed surveys—Continued.
North Carolina:	North Carolina:	North Carolina:
Cabarrus County..... \$617.07	The survey of Cabarrus, Granville, and Mecklenburg Counties are now in progress. Upon the completion of these areas, the survey of Johnson, Randolph, and Richmond Counties will be undertaken. It is estimated that the sum of \$7,000 will be required for this work during the fiscal year 1911.	Soil survey work in this State is carried on in cooperation with the North Carolina State department of agriculture. In order that this work may be continued and properly carried on, not less than \$5,000 should be made available during the fiscal year 1912. Urgent requests are now on file from the North Carolina State department of agriculture and from large numbers of agricultural and business organizations in the State for a substantial increase in the work to be undertaken.
Area begun April 25, 1910, and will be completed during fiscal year 1911.		
Gaston County..... 1,676.57		
Granville County..... 1,073.30		
Area begun Oct. 18, 1909. Work was temporarily suspended Dec. 7, 1909, and resumed May 30, 1910. Area will be completed during fiscal year 1911.		
Mecklenburg County..... 1,915.29		
Area begun Nov. 18, 1909. Work was temporarily suspended Dec. 22, 1909, and resumed Mar. 13, 1910. Area will be completed during fiscal year 1911.		
Scotland County..... 1,726.75		
Area begun during previous fiscal year and completed Dec. 15, 1909.		
North Dakota:		North Dakota:
Detailed survey of North Dakota experimental farms... 1,052.61		It is hoped that not less than \$2,500 may be available for soil survey work in the State of North Dakota during the fiscal year 1912.
Ohio:	Ohio:	Ohio:
Auglaize County..... 746.35	At least one area should be undertaken with the opening of the spring field season, and the sum of \$1,500 should be set aside for that purpose.	In order that additional work may be taken up in this State, not less than \$2,500 should be made available for that purpose during the fiscal year 1912.
Area begun during previous fiscal year and completed Sept. 10, 1909.		
Oregon:	Oklahoma:	Oklahoma:
Marshfield area..... 2,379.03	Numerous requests are on file for soil surveys in this State to aid in the development of the agricultural resources in the sparsely settled regions. The survey of at least one area should be made during the fiscal year 1911, and the sum of \$2,000 should be set aside for that purpose.	Numerous requests are on file requesting that additional areas may be surveyed in this State and it is hoped that at least \$3,000 may be used for that work during the fiscal year 1912.
Rogue River Valley area..... 438.11		
Area begun May 26, 1910, and will be completed during fiscal year 1911.		
Pennsylvania:	Oregon:	Oregon:
Bedford County..... 315.21	The Rogue River Valley area begun in the last fiscal year will be completed during the fiscal year 1911. It is hoped that additional work may be undertaken upon the opening of the spring field season. The cost of the work to be accomplished in this State during the fiscal year 1911 is estimated at \$3,000.	In order that additional work may be undertaken in the rapidly developing fruit sections in the western portion of the State and in order to aid in the development of the agricultural resources in the eastern portion of the State, not less than \$3,000 should be made available during the fiscal year 1912.
Area begun May 27, 1910, and will be completed during fiscal year 1911.		
Berks County..... 3,143.80	Pennsylvania:	Pennsylvania:
Area begun during previous fiscal year and completed Nov. 25, 1909.	The Bedford, Bradford, Erie, and Washington County areas will be completed during the fiscal year 1911. With the opening of the spring field season it is hoped that other areas may be undertaken, and at least \$5,000 made available for the work in this State.	Numerous urgent requests from local granges, agricultural associations and others, bearing the endorsement of the State department of agriculture and the State Agricultural College, are on file requesting that additional work shall be undertaken in this State, and not less than \$5,000 should be made available during the fiscal year 1912. Soil survey work in the State of Pennsylvania is carried on in cooperation with the State College of Agriculture.
Bradford County..... 590.97		
Area begun May 1, 1910, and will be completed during fiscal year 1911.		
Erie County..... 395.71		
Area begun May 25, 1910, and will be completed during fiscal year 1911.		
Washington County..... 209.06		
Area begun May 27, 1910, and will be completed during the fiscal year 1911.		
South Carolina:	South Carolina:	South Carolina:
Clarendon County..... 1,871.96	The Fairfield and Georgetown County areas have been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$4,000.	Not less than \$4,000 should be made available for additional soil survey work in this State during the fiscal year 1912.
Conway area..... 144.42		
Area completed Aug. 5, 1909, balance of area having been surveyed during previous fiscal year.		
Saluda County..... 95.43		
Area completed July 11, 1909, balance of area having been surveyed during previous fiscal year.		
Tennessee:		Tennessee:
Sumner County..... 272.69		Requests now on file for additional soil-survey work cover three-fourths of the counties in this State. To aid in the development of the agricultural resources, and to study the great diversity of soils in this State, not less than \$3,000 should be made available during the fiscal year 1912.
Area completed July 26, 1909, balance of area having been surveyed during previous fiscal year.		
Texas:	Texas:	Texas:
Camp County..... 66.36	The soil survey of Harrison County has been assigned, and at least one other detailed area should be undertaken during the fiscal year of 1911, and the sum of \$3,000 made available for this work.	Not less than \$3,500 should be made available for detailed work in the State of Texas during the fiscal year 1912.
Revision and reclassification of soils.		
Ellis County..... 3,638.14		
Grayson County..... 193.59		
Area completed July 11, 1909, balance of area having been surveyed during previous fiscal year.		
Morris County..... 202.35		
Revision and reclassification of soils.		
	Utah:	
	Urgent requests are on file for the survey of the agricultural lands of Cache County. If the finances of the bureau will permit, it is hoped that this work may be undertaken with the opening of the spring field season, and that the sum of \$1,000 may be set aside for that purpose.	

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Cont'd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), \$133,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Detailed surveys—Continued.	Detailed surveys—Continued.	Detailed surveys—Continued.
Virginia: Campbell County..... \$1,779.11 Area begun during previous fiscal year and completed Dec. 6, 1909.		Vermont: Only one survey has thus far been made in the State of Vermont. It is hoped that at least one area in the northern portion of this State can be surveyed during the fiscal year 1912. For this purpose a minimum allotment of \$2,000 should be made.
West Virginia: Jackson area..... 239.55 Area begun June 3, 1910, and will be completed during fiscal year 1911. Soil-survey work in the State of West Virginia is carried on in cooperation with the West Virginia geological survey, which survey pays all field expenses.	West Virginia: The Jackson and Clarksburg areas have been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$2,000.	Virginia: Urgent requests are on file for additional detailed soil surveys in the State of Virginia, particularly in the tide-water section, where there is need for a determination of the lands suitable for truck and market gardening, and in the western portion of the State to aid in the development of the fruit industry. At least \$2,500 should be made available for this work.
Spencer area..... 916.75 Area begun during previous fiscal year and completed Nov. 18, 1909.		West Virginia: The soil-survey work in this State is carried on in cooperation with the West Virginia State Department of Agriculture, the State assuming all field expenses. The State officials urgently request that additional work shall be undertaken and as rapid progress made as possible, and in order to handle the work properly not less than \$2,500 should be subject to expenditure during the fiscal year 1912.
Wisconsin: Bayfield area..... 1,110.47 Fond du Lac County..... 396.99 Work begun May 9, 1910, and will be completed during fiscal year 1911.	Wisconsin: The Fond du Lac, Iowa, Juneau, La Crosse, and Waukesha areas have been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$6,000.	Wisconsin: The soil survey work in this State is carried on in cooperation with the Wisconsin State Department of Agriculture. To aid in the further development of the agricultural resources of the State not less than \$6,000 should be made available for the prosecution of the work during the fiscal year 1912.
Iowa County..... 1,271.07 Field work was temporarily suspended Nov. 22, 1909, and resumed May 13, 1910. Area will be completed during fiscal year 1911.		
Juneau County..... 467.58 Area begun May 1, 1910, and will be completed during fiscal year 1911.		
Waukesha County..... 1,793.34 Wausara County..... 1,262.84		
Reconnaissance surveys.	Reconnaissance surveys.	Reconnaissance surveys.
Arkansas: Ozark district..... 881.23	Arkansas: The reconnaissance survey of the Ozark region begun during the last fiscal year will be completed during the fiscal year 1911 at an estimated cost of \$660.	
	Kansas: The reconnaissance survey of the western half of the State of Kansas has been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$12,000. The area to be covered is approximately 40,000 square miles.	Colorado: It is highly desirable that a reconnaissance survey of the eastern portion of the State of Colorado shall be made at the earliest possible date. It will require not less than \$5,000 to accomplish this work.
	Nebraska: If the finances of the Bureau will permit, it is hoped that a reconnaissance survey of the western half of the State of Nebraska may be begun with the opening of the spring field season, and not less than \$5,000 should be set aside for that purpose.	Minnesota: The necessity for reconnaissance soil survey work in the northern half of the State of Minnesota is so pressing that the State College of Agriculture of the University of Minnesota is trying to arrange for cooperation on the basis of \$10,000 from the State and an equal amount from the Bureau of Soils. Not less than \$5,000 should be made available during the fiscal year 1912 to enable the Bureau to carry on the work.
Nevada: Truckee-Carson project..... 396.65		Nebraska: Not less than \$10,000 should be set aside for a reconnaissance survey of the western half of the State of Nebraska during the fiscal year 1912, covering approximately 35,000 square miles.
Pennsylvania: South-Central Pennsylvania..... 700.29 Area begun May 2, 1910, and will be completed during fiscal year 1911.	Pennsylvania: A reconnaissance survey of the north-central portion of this State has been assigned and will be completed during the fiscal year 1911 at an estimated cost of \$5,000.	Pennsylvania: It is hoped that additional reconnaissance work in this State may be undertaken during the fiscal year 1912, and that at least \$7,000 may be made available for that purpose.
Southwestern Pennsylvania..... 3,151.99 Area surveyed in part during previous fiscal year.		

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## Bureau of Soils—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Soils, 1910 (soil survey), \$137,360—Cont'd.</i>	<i>General expenses, Bureau of Soils, 1911 (soil survey), 135,160—Continued.</i>	<i>General expenses, Bureau of Soils, 1912 (soil survey), \$166,960.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Reconnaissance surveys—Continued.	Reconnaissance surveys—Continued.	Reconnaissance surveys—Continued.
South Dakota: Western South Dakota..... \$13,634.02 Area surveyed in part during previous fiscal year.	Texas: The reconnaissance survey of an area covering approximately 15,000 square miles in the south central portion of the State of Texas has been assigned and will be completed during the fiscal year 1911, at an estimated cost of \$12,000.	Texas: At least \$12,000 should be made available for additional reconnaissance work in the western portion of this State during the fiscal year 1912.
Washington: Northwestern Puget Sound district..... 3,388.08 Area surveyed in part during previous fiscal year.	Washington: A reconnaissance survey of the Western Puget Sound section of the State of Washington begun during the last fiscal year will be completed during the fiscal year 1911, at an estimated cost of \$6,000.	Washington: Not less than \$6,000 should be made available for additional reconnaissance work in the State of Washington during the fiscal year 1912, to aid in the development of the agricultural resources of the State.
Western Puget Sound district..... 1,865.93 Area begun May 7, 1910, and will be completed during fiscal year 1911.		
Wisconsin: Marquette County..... 2,809.78		
<i>General expenses, Bureau of Soils, 1910 (administrative expenses), \$7,000.</i>	<i>General expenses, Bureau of Soils, 1911 (administrative expenses), \$5,440.</i>	<i>General expenses, Bureau of Soils, 1912 (administrative expenses), \$5,140.</i>
Lump-fund salaries in Washington..... \$4,219.75	Lump-fund salaries in Washington..... \$1,800.00	Stationery..... \$1,485.00
Stationery..... 837.73	Stationery..... 1,090.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 2,200.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 785.23	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,150.00	Furniture..... 450.00
Furniture..... 270.92	Furniture..... 450.00	Freight..... 40.00
Freight..... 21.77	Freight..... 35.00	Express..... 170.00
Express..... 155.33	Express..... 160.00	Telegraph..... 100.00
Telegraph..... 84.29	Telegraph..... 90.00	Telephone..... 70.00
Telephone..... 59.55	Telephone..... 65.00	Apparatus, instruments, and laboratory material..... 125.00
Apparatus, instruments, and laboratory material..... 22.79	Apparatus, instruments, and laboratory material..... 150.00	Travel and station and field expenses..... 500.00
Travel and station and field expenses..... 423.41	Travel and station and field expenses..... 450.00	
Total Expenditures to Aug. 31, 1910..... 6,880.82	Total Amount of Appropriation (a Decrease from 1910 of \$1,560) ... 5,440.00	Total Amount Estimated (an Apparent Decrease from 1911 of \$300) .... 5,140.00
Total amount of appropriation..... 7,000.00		NOTE.—One publicity agent at \$1,800, now carried on the administrative roll, has been transferred to the statutory roll, which makes an actual increase over 1911 of \$1,500.
Total expenditures under above groups..... 6,880.82		
Unexpended balance on Aug. 31, 1910..... 119.18		
Outstanding liabilities (estimated)..... 33.00		
Balance to be turned back in Treasury (estimated)..... 86.18		
PROJECTS.	PROJECTS.	PROJECTS.
Administrative expenses..... 6,913.82	Administrative expenses..... 5,440.00	Administrative expenses..... 5,140.00
Publicity: In connection with the field and laboratory investigations carried on by this bureau it has been found desirable to disseminate to the public certain conclusions in advance of formal publications. The publicity work consists of the preparation of press notices embodying in concise and popular form the results of such investigations. The cost of this work during the fiscal year 1910 was..... 3,360.34	Publicity..... 2,000.00	Publicity..... 200.00
Contingent expenses: Miscellaneous supplies, furniture, stationery, typewriters, apparatus, administrative traveling expenses, telephone, telegraph, freight, express, hire of laborers, and miscellaneous and contingent expenses for the maintenance and operation of offices and laboratories..... 2,763.48	Contingent expenses..... 3,440.00	Contingent expenses..... 4,940.00
Salaries of plumbers carried on our rolls but detailed to shops..... 790.00		
Total of all payments for the Bureau of Soils to Aug. 31, 1910..... 231,416.09		
Less repayments to credit of appropriations..... 229.95		
Net expenditures to Aug. 31, 1910..... 231,186.14		
Outstanding liabilities Aug. 31, 1910 (estimated)..... 777.51		
Balance to be turned back in Treasury (estimated)..... 896.35		
Total of all appropriations for the Bureau of Soils. 232,860.00	Total appropriations for the Bureau of Soils (a decrease from 1910 of \$1,840)..... 231,020.00	Total amount estimated for the Bureau of Soils (an increase over 1911 of \$49,700)..... 280,720.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

BUREAU OF ENTOMOLOGY.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Bureau of Entomology, 1910, \$29,280.	Salaries, Bureau of Entomology, 1911, \$29,280.	Salaries, Bureau of Entomology, 1912, \$60,130.
Howard, L. O..... Chief of bureau, at \$4,000..... \$4,000.00	1 entomologist, who shall be chief of bureau..... \$4,000.00	1 entomologist, who shall be chief of bureau (increase of \$500 submitted)..... \$4,500.00
Gilliss, Chas. J..... Chief clerk, at \$1,800..... 300.00	1 chief clerk..... 1,800.00	
Tastet, W. F..... Clerk, class 3..... 1,600.00	2 clerks, class 3..... 3,200.00	1 executive assistant (by transfer from lump fund for general expenses, miscellaneous insects)..... 2,250.00
Althouse, R. C..... Clerk, class 3..... 266.67	4 clerks, class 2..... 5,600.00	1 chief clerk..... 1,800.00
Leister, A. J..... Clerk, class 3..... 1,333.33	1 artist..... 1,400.00	1 clerk, class 4 (by transfer from lump fund for moths)..... 1,800.00
Tastet W. F..... Clerk, class 2..... 1,050.00	4 clerks, class 1..... 4,800.00	2 clerks, class 3..... 3,200.00
Blesi, Edward..... Clerk, class 2..... 350.00	5 clerks, at \$1,000 each..... 5,000.00	6 clerks, class 2 (increase of two by transfer from lump fund for general expenses, southern field crop insects and moths)..... 8,400.00
Wood, Elmer C..... Clerk, class 2..... 1,400.00	1 messenger..... 840.00	4 clerks, class 1..... 4,800.00
Champney, Mary G..... Clerk, class 2..... 1,400.00	1 messenger..... 720.00	5 clerks, at \$1,000 each..... 5,000.00
Colcord, Mabel..... Clerk, class 2..... 233.34	1 laborer..... 720.00	2 clerks, at \$900 each (by transfer from lump fund for general expenses, southern field crop insects and moths)..... 1,800.00
Cunningham, Boyd C..... Clerk, class 2..... 1,166.66	2 charwomen, at \$480 each..... 960.00	1 clerk (by transfer from lump fund for moths)..... 720.00
Leister, A. J..... Artist, at \$1,400..... 1,400.00	1 charwoman..... 240.00	1 artist..... 1,400.00
Strauss, J. F..... Clerk, class 1..... 300.00		1 superintendent of moth work (by transfer from lump fund for moths)..... 2,750.00
Blesi, Edward..... Clerk, class 1..... 900.00		1 assistant superintendent of moth work (by transfer from lump fund for moths)..... 1,080.00
Keleher, T. A..... Clerk, class 1..... 1,000.00		1 entomological assistant (by transfer from lump fund for general expenses, miscellaneous insects)..... 1,800.00
Cunningham, Boyd C..... Clerk, class 1..... 200.00		1 entomological draftsman (by transfer from lump fund for general expenses, miscellaneous insects)..... 1,400.00
Reynolds, Bronte A..... Clerk, class 1..... 250.00		1 entomological draftsman (by transfer from lump fund for moths)..... 1,080.00
Knabe, Frederick..... Clerk, class 1..... 800.00		3 foremen, at \$1,080 each (by transfer from lump fund for moths)..... 3,240.00
Marks, Jessie E..... Clerk, class 1..... 146.67		1 entomological assistant (by transfer from lump fund for general expenses, deciduous fruit insects)..... 900.00
Menagh, Charles S..... Clerk, class 1..... 1,200.00		2 entomological preparators, at \$840 each (by transfer from lump fund for general expenses, miscellaneous insects and bee culture)..... 1,680.00
Vedder, Frank W..... Clerk, at \$1,000..... 750.00		1 entomological preparator (by transfer from lump fund for general expenses, miscellaneous insects)..... 720.00
Armstrong, Kennett..... Clerk, at \$1,000..... 250.00		6 entomological preparators, at \$600 each (five by transfer from lump fund for general expenses, one each from forest insects, truck crop insects, three from miscellaneous insects, and one from moths)..... 3,600.00
Keleher, T. A..... Clerk, at \$1,000..... 125.01		2 student assistants, at \$300 each (by transfer from lump fund for general expenses, forest insects and truck crop insects)..... 600.00
Condron, Gertrude C..... Clerk, at \$1,000..... 805.55		1 messenger..... 840.00
Reynolds, Bronte A..... Clerk, at \$1,000..... 122.23		2 messengers or laborers, at \$720 each (two places at same salary combined)..... 1,440.00
Dashiell, Ellen M..... Clerk, at \$1,000..... 877.77		1 mechanic (by transfer from lump fund for moths)..... 840.00
Menagh, Charles S..... Clerk, at \$1,000..... 1,000.00		1 mechanic (by transfer from lump fund for moths)..... 750.00
Marshall, Margaret..... Clerk, at \$1,000..... 1,000.00		1 laborer (by transfer from lump fund for general expenses, southern field crop insects)..... 540.00
Meyers, W. Clarence..... Clerk, at \$1,000..... 606.67		2 charwomen, at \$480 each..... 960.00
Borochoff, Jacob M..... Messenger, at \$840..... 233.33		1 charwoman..... 240.00
Lynch, Lewis M..... Messenger, at \$720..... 146.00		
Hanford, John G..... Laborer, at \$720..... 354.00		
Lynch, Lewis M..... Laborer, at \$720..... 718.00		
Walker, S. Benson..... Charwoman, at \$480..... 48.00		
Reeves, John L..... Charwoman, at \$480..... 480.00		
Jones, Hortentia..... Charwoman, at \$240..... 240.00		
Washington, F. J..... Charwoman, at \$240..... 240.00		
Total..... 29,179.23		
Unexpended balance..... 100.77		
Total amount of above appropriation..... 29,280.00	Total amount of above appropriation (no increase)..... 29,280.00	Total amount estimated (an apparent increase over 1911 of \$30,850)..... 60,130.00

NOTE.—An increase of \$30,850 is submitted. Of this sum \$15,190 covers the transfer of seventeen employees from the lump fund for general expenses, \$15,160 the transfer of thirteen employees from the lump fund for preventing the spread of moths, both of these lump funds being reduced accordingly, and \$500 for an increase in the salary of the chief of bureau. The increase in the salary of the chief of bureau is well de-

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## Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Entomology, 1910, \$29,280—Continued.</i>	<i>Salaries, Bureau of Entomology, 1911, \$29,280—Continued.</i>	<i>Salaries, Bureau of Entomology, 1912, \$60,130—Continued.</i>
		served, and will make his salary more nearly agree with the salaries of chiefs of other bureaus in the departmental service. The changes in detail are as follows:
		Transfers from lump fund for general expenses—
		1 employee from deciduous fruit insects..... \$900.00
		3 employees from southern field crop insects..... 2,840.00
		2 employees from forest insects..... 900.00
		2 employees from truck crop and stored product insects..... 900.00
		1 employee from bee culture.. 840.00
		8 employees from miscellaneous insects..... 8,810.00
		Transfers from lump fund for preventing spread of moths—
		13 employees..... 15,160.00
		Promotions—
		1 chief of bureau..... 500.00
		30,850.00
The above force performed the following duties:	The above force is performing the following duties:	The above force will perform the following duties:
Administrative and executive:	Administrative and executive:	Administrative and executive:
1 chief of bureau..... \$1,000.00	1 chief of bureau... \$4,000.00	1 chief of bureau.. 4,500.00
1 chief clerk..... 1,800.00	1 chief clerk..... 1,800.00	1 executive assistant..... 2,250.00
		1 chief clerk..... 1,800.00
		8,550.00
Correspondence, files, and records:	Correspondent, files, and records:	Correspondence, files, and records:
2 clerks, class 3..... 3,200.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3.... 1,600.00
2 clerks, class 2..... 2,800.00	3 clerks, class 2.... 4,200.00	3 clerks, class 2.... 4,200.00
3 clerks, class 1..... 3,600.00	3 clerks, class 1.... 3,600.00	3 clerks, class 1.... 3,600.00
4 clerks, at \$1,000 each..... 4,000.00	4 clerks, at \$1,000 each..... 4,000.00	5 clerks, at \$1,000 each..... 5,000.00
		14,400.00
Accounts and property:	Accounts and property:	Accounts and property:
1 clerk, class 2..... 1,400.00	1 clerk, class 3..... 1,600.00	1 clerk, class 4.... 1,800.00
1 clerk, class 1..... 1,200.00	1 clerk..... 1,000.00	1 clerk, class 3.... 1,600.00
		3,400.00
Library:	Library:	Library:
1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00
Illustrations:	Illustrations:	Illustrations:
1 artist..... 1,400.00	1 artist..... 1,400.00	1 artist..... 1,400.00
		1 entomological draftsman..... 1,400.00
		1 entomological draftsman..... 1,080.00
		3,880.00
Editorial:	Editorial:	Editorial:
1 clerk..... 1,000.00	1 clerk, class 1..... 1,200.00	1 entomological assistant..... 1,800.00
		1 clerk, class 1.... 1,200.00
		3,000.00
		Preparation of specimens:
		2 entomological preparators, at \$840 each..... 1,680.00
		1 entomological preparator..... 720.00
		6 entomological preparators, at \$600 each..... 3,600.00
		2 student assistants, at \$300 each..... 600.00
		6,600.00
Messenger service:	Messenger service:	Messenger service:
1 messenger..... 840.00	1 messenger..... 840.00	1 messenger..... 840.00
1 messenger..... 720.00	1 messenger..... 720.00	1 messenger..... 720.00
		1,560.00
Janitor and labor service:	Janitor and labor service:	Janitor and labor service:
1 laborer..... 720.00	1 laborer..... 720.00	1 laborer..... 720.00
2 charwomen, at \$480 each..... 960.00	2 charwomen, at \$480 each..... 960.00	2 charwomen, at \$480 each..... 960.00
1 charwoman..... 240.00	1 charwoman..... 240.00	1 charwoman..... 240.00
		1,920.00
		Field force transferred to statutory roll:
		1 superintendent of moth work... 2,750.00
		1 assistant superintendent of moth work..... 1,080.00
		2 clerks, class 2.... 2,800.00
		2 clerks, at \$900 each..... 1,800.00
		1 clerk..... 720.00
		3 foremen at \$1,080 each..... 3,240.00
		1 entomological assistant..... 900.00
		1 mechanic..... 840.00
		1 mechanic..... 750.00
		1 laborer..... 540.00
		15,420.00
29,280.00	29,280.00	60,130.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>General expenses, Bureau of Entomology, 1910 (deciduous fruit insects), \$43,600 (original subappropriation of \$46,600 decreased by transfer of \$1,600 to cereal and forage insects and \$1,500 to forest insects).</p> <p>Salaries: In Washington.....\$4,743.51 Out of Washington.....17,636.22 Stationery.....89.33 Miscellaneous supplies and services, equipment, books, machinery, etc.....5,462.33 Furniture.....383.83 Fuel.....41.25 Freight.....176.83 Express.....181.68 Telegraph.....31.76 Telephone.....59.70 Rent.....951.00 Apparatus, instruments, and laboratory material.....1,664.87 Traveling and station and field expenses.....8,211.89</p> <p>Total expenditures to Aug. 31, 1910.....39,634.20 Outstanding liabilities on Aug. 31, 1910 (estimated).....1,381.25 Balance to be turned back in Treasury (estimated).....2,584.55</p> <p>Total amount of above appropriation.....43,600.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:</p> <p>(1) Deciduous fruit insect investigations. Under this section of the work of the bureau the general subject of insects damaging deciduous fruits and vineyards in the United States has been carried on. Many individual projects are involved. Some of the most important of these have been considerably enlarged and additional ones have been undertaken. Field stations are maintained in regions largely devoted to fruit culture, and these stations are located so as to represent as great a range as possible of climatic conditions. Among the projects now in hand under this heading are investigations of the grape phylloxera, codling moth, pear thrips, orange thrips, plum curculio, the grape-root worm and berry moth, and peach borer investigations. Together with these, many other fruit insects of less importance are being studied, and practical control work is being demonstrated in the field.....19,634.20</p> <p>(2) Pear thrips investigations in California. By reason of the provision of Congress, this investigation was materially enlarged in 1908, work having been carried out in three different localities in the infested territory, representing essential differences in soil and irrigation conditions. Most gratifying progress has been made and effective methods of control have been determined, as detailed in Bulletin 80, Part IV, of the Bureau of Entomology. Further investigations are needed to reduce control measures to the most economical basis possible consistent with efficiency, and to demonstrate to orchardists the necessity of the timely and thorough use of the recommended measures. Further local studies on the behavior of the insect are also necessary in view of the considerable variation in climatic and other conditions in the various valleys.....15,000.00</p> <p>(3) Cranberry insect investigations. This work has been considerably enlarged during the season of 1909, additional important lines of work having been undertaken, including demonstrations in spraying in different cranberry marshes as a means of affording instruction to the growers. The assignment of an additional man to the work has made it possible to give needed attention to the life-history studies of the principal cranberry insects. It is desirable to continue this work in its present scope.....5,000.00</p>	<p>General expenses, Bureau of Entomology, 1911 (deciduous fruit insects), \$40,600.</p> <p>Salaries: In Washington.....\$3,750.00 Out of Washington.....19,400.00 Stationery.....100.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....5,650.00 Furniture.....500.00 Fuel.....150.00 Freight.....200.00 Express.....200.00 Telegraph.....50.00 Telephone.....100.00 Rent.....1,000.00 Apparatus, instruments, and laboratory material.....1,500.00 Traveling and station and field expenses.....8,000.00</p> <p>Total amount of above appropriation (a decrease from 1910 of \$3,000).....40,600.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:</p> <p>(1) Deciduous fruit insect investigations. This project is explained in column 1 of this sheet. Amount allotted.....18,600.00</p> <p>(2) Pear thrips investigations in California. This project is explained in column 1 of this sheet. Amount allotted.....12,000.00</p> <p>(3) Cranberry insect investigations. This project is explained in column 1 of this sheet. Amount allotted...5,000.00</p> <p>(4) Orange thrips investigations. For several years past orange growers in California, especially in the Tulare district, have lost heavily by the work of the orange thrips causing a scabbing of the fruit, thus greatly lessening its market value. This insect has been the subject of investigation in a preliminary way in 1908, and more extensively in 1909.</p>	<p>General expenses, Bureau of Entomology, 1912 (deciduous fruit insects), \$39,700.</p> <p>Salaries: In Washington.....\$3,750.00 Out of Washington.....19,400.00 Stationery.....100.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....4,750.00 Furniture.....500.00 Fuel.....150.00 Freight.....200.00 Express.....200.00 Telegraph.....50.00 Telephone.....100.00 Rent.....1,000.00 Apparatus, instruments, and laboratory material.....1,500.00 Traveling and station and field expenses.....8,000.00</p> <p>Total amount estimated (a decrease from 1911 of \$900).....39,700.00</p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:</p> <p>(1) Deciduous fruit insect investigations. This project is explained in column 1 of this sheet. Amount estimated.....17,700.00</p> <p>(2) Pear thrips investigations in California. This project is explained in column 1 of this sheet. Amount estimated.....12,000.00</p> <p>(3) Cranberry insect investigations. This project is explained in column 1 of this sheet. Amount estimated5,000.00</p> <p>(4) Orange thrips investigations. This project is explained in column 2 of this sheet. Amount estimated5,000.00</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Entomology, 1910 (deciduous fruit insects), \$43,600 (original subappropriation of \$46,600 decreased by transfer of \$1,500 to cereal and forage insects and \$1,500 to forest insects)—Cont'd.</i>	<i>General expenses, Bureau of Entomology, 1911 (deciduous fruit insects), \$40,600—Continued.</i>	<i>General expenses, Bureau of Entomology, 1912 (deciduous fruit insects), \$39,700—Continued.</i>
	Considerable progress has been made in establishing a satisfactory treatment. However, its importance as an orange pest in the region mentioned, and its possible dissemination to other orange-growing sections of California, warrants as thorough an investigation as possible. The insect is already established and has been the cause of considerable injury in the orange-growing region of Arizona. Amount allotted.....	
	\$5,000.00	
<i>General expenses, Bureau of Entomology, 1910 (forest insects), \$13,500 (original subappropriation of \$12,000 increased by transfer of \$1,500 from deciduous fruit insects).</i>	<i>General expenses, Bureau of Entomology, 1911, (forest insects), \$14,000.</i>	<i>General expenses, Bureau of Entomology, 1912 (forest insects), \$44,750.</i>
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington.....	In Washington.....
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery.....	Stationery.....	Stationery.....
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....
Furniture.....	Furniture.....	Furniture.....
Express.....	Express.....	Express.....
Telegraph.....	Telegraph.....	Telegraph.....
Apparatus, instruments, and laboratory material.....	Apparatus, instruments, and laboratory material.....	Apparatus, instruments, and laboratory material.....
Traveling and station and field expenses.....	Traveling and station and field expenses.....	Traveling and station and field expenses.....
Total expenditures to Aug. 31, 1910.....		
Repayments to credit of appropriation.....		
Total net expenditures to Aug. 31, 1910.....		
Outstanding liabilities on Aug. 31, 1910 (estimated).....		
Balance to be turned back in Treasury (estimated).....		
Total amount of above appropriation.....	Total amount of above appropriation (an increase over 1910 of \$500).....	Total amount estimated (an increase over 1911 of \$30,750).....
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Forest insect investigations. The object of this line of work is to conduct original investigations on the subject of insect damage to standing timber and forest products, in order to determine the principal enemies, the character and extent of the problems which, on account of the losses involved, demand especial attention, and the more important facts in the life and habits of the destructive insects, local forest management, lumbering operations, beneficial insects, and other natural influences upon which to base conclusions and recommendations relating to practical methods of preventing losses. It has already been clearly demonstrated by the success of a number of efforts to control serious outbreaks that a large per cent of the losses caused by insect depredations on forests and forest products can be prevented through ordinary business management with little or no ultimate expenses to the owners or products. The work has been well received and is being carried on actively. Many individual projects are under way in the course of this work.....	(1) Forest insect investigations. This project is explained in column 1 of this sheet. Amount allotted ...	(1) Forest insect investigations. This project is explained in column 1 of this sheet. Amount estimated.....
	14,000.00	44,750.00
13,448.09		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Entomology, 1910 (cereal and forage insects), \$22,500 (original subappropriation of \$21,000 increased by transfer of \$1,500 from deciduous fruit insects).</i>	<i>General expenses, Bureau of Entomology, 1911 (cereal and forage insects), \$25,000.</i>	<i>General expenses, Bureau of Entomology, 1912 (cereal and forage insects), \$35,000.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$4,221.67	In Washington..... \$2,750.00	In Washington..... \$2,750.00
Out of Washington..... 11,668.79	Out of Washington..... 15,000.00	Out of Washington..... 19,400.00
Stationery..... 2.96	Stationery..... 50.00	Stationery..... 75.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 701.83	Miscellaneous supplies and services, equipment, books, machinery, etc..... 675.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 800.00
Furniture..... 91.45	Furniture..... 100.00	Furniture..... 150.00
Freight..... 26.57	Freight..... 50.00	Fuel..... 100.00
Express..... 40.45	Express..... 50.00	Freight..... 75.00
Telegraph..... 34.72	Telegraph..... 50.00	Express..... 75.00
Rent..... 327.07	Rent..... 500.00	Telegraph..... 50.00
Gas and electricity..... 12.21	Gas and electricity..... 25.00	Rent..... 500.00
Apparatus, instruments, and laboratory material..... 661.77	Apparatus, instruments, and laboratory material..... 750.00	Gas and electricity..... 25.00
Travel and station and field expenses..... 3,959.18	Travel and station and field expenses..... 5,000.00	Apparatus, instruments and laboratory material..... 1,000.00
Total expenditures to Aug. 31, 1910..... 21,748.67	Total amount of above appropriation (an increase over 1910 of \$2,500)..... 25,000.00	Total amount estimated (an increase over 1911 of \$10,000)..... 35,000.00
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 432.35		
Balance to be turned back in Treasury (estimated)..... 318.98		
Total amount of above appropriation..... 22,500.00		
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Cereal and forage insect investigations. This work has been actively followed for several years past and now covers the entire United States. Extensive cooperative experiments have been carried on throughout the wheat-growing belt in regard to the Hessian fly. Important facts have been gained with regard to the remedial work, and most important discoveries have been made and are still being made in regard to the practical handling of the parasites of this destructive insect. The same may be said of joint worms, the so-called green bug, and other insects damaging winter wheat, as well as those attacking all other grains and forage crops. The savings to farmers in the case of the investigation of one insect alone are said by those financially interested to have amounted to over \$1,000,000 in 1909..... 22,181.02	(1) Cereal and forage insect investigations. This project is explained in column 1 of this sheet. Amount allotted..... 25,000.00	(1) Cereal and forage insect investigations. This project is explained in column 1 of this sheet. Amount estimated..... 25,000.00
		(2) Investigation of alfalfa insects. The alfalfa weevil, which, some years ago, was accidentally introduced into this country about Salt Lake City, Utah, and which, during the season of 1910, caused an estimated damage to the alfalfa crop of half a million dollars, is rapidly spreading in all directions from the point of original discovery, extending into the adjacent States. Amount estimated..... 5,000.00
		(3) Investigations of the white grub and wireworms. These are two of the most destructive insects to corn and timothy meadows, and investigations are to be carried on in cooperation with the States of Illinois, New Jersey, Indiana, Tennessee, and Washington. Amount estimated..... 5,000.00
<i>General expenses, Bureau of Entomology, 1910 (truck crop and stored product insects), \$16,250.</i>	<i>General expenses, Bureau of Entomology, 1911 (truck crop and stored product insects), \$16,250.</i>	<i>General expenses, Bureau of Entomology, 1912 (truck crop and stored product insects), \$19,100.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$6,229.66	In Washington..... \$5,750.00	In Washington..... \$5,750.00
Out of Washington..... 5,096.50	Out of Washington..... 6,336.50	Out of Washington..... 8,000.00
Stationery..... 123.25	Stationery..... 125.00	Stationery..... 175.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 557.31	Miscellaneous supplies and services, equipment, books, machinery, etc..... 88.50	Miscellaneous supplies and services, equipment, books, machinery, etc..... 175.00
Furniture..... 203.45	Furniture..... 225.00	Furniture..... 250.00
Freight..... 16.79	Freight..... 25.00	Freight..... 25.00
Express..... 47.07	Express..... 50.00	Express..... 50.00
Telegraph..... 18.77	Telegraph..... 25.00	Telegraph..... 25.00
Rent..... 101.77	Rent..... 125.00	Rent..... 125.00
Apparatus, instruments, and laboratory material..... 497.99	Apparatus, instruments, and laboratory material..... 500.00	Apparatus, instruments, and laboratory material..... 525.00
Traveling and station and field expenses..... 2,819.70	Traveling and station and field expenses..... 3,000.00	Traveling and station and field expenses..... 4,000.00
Total expenditures to Aug. 31, 1910..... 15,712.26	Total amount of above appropriation..... 16,250.00	Total amount estimated (an increase over 1911 of \$2,850)..... 19,100.00
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 281.56		
Balance to be turned back in Treasury (estimated)..... 256.18		
Total amount of above appropriation..... 16,250.00		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>General expenses, Bureau of Entomology, 1910 (truck crop and stored product insects), \$16,250—Continued.</i></p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Investigations of insects injurious to truck crops. Owing to the widened scope of these investigations, and the increasing demand from truck growers all over the United States for information in regard to insect enemies, this work has been extended by the establishment of temporary field stations in the States of California, Colorado, Maryland, Mississippi, Texas, and Virginia. Among the most important projects under this heading are investigations of sugar-beet insects; insects injurious to hops, and insects affecting late crops of cauliflower, cabbage, and other plants grown in extensive truck-growing regions..... \$10,993.82</p> <p>(2) Investigations of insects affecting stored grain and other stored products, especially the flour beetles, the Mediterranean flour moth, and other insects which injure flour for export and cereal breakfast foods; an investigation of the life history and habits of the so-called fig worm is also being conducted..... 5,000.00</p> <p><i>General expenses, Bureau of Entomology, 1910 (southern field crop insects), \$42,000.</i></p> <p>Salaries: In Washington..... \$1,975.01 Out of Washington..... 21,192.64 Stationery..... 211.20 Miscellaneous supplies and services, equipment, books, machinery, etc..... 3,136.83 Furniture..... 155.98 Fuel..... 53.50 Freight..... 183.98 Express..... 82.49 Telegraph..... 42.96 Telephone..... 110.50 Rent..... 1,140.00 Gas and electricity..... 39.21 Apparatus, instruments, and laboratory material..... 720.63 Travel and station and field expenses..... 10,846.01</p> <p>Total expenditures to Aug. 31, 1910..... 39,890.94 Outstanding liabilities on Aug. 31, 1910 (estimated)..... 1,204.15 Balance to be turned back in Treasury (estimated)..... 904.91</p> <p>Total amount of above appropriation..... 42,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Rice insect investigations. The subject of insects that damage rice has not been handled by the entomological service of the Department of Agriculture since 1881. In the meantime rice culture has grown to considerable proportions in new localities, such as Texas and Louisiana, and has encountered new insect pests and variations in the habits of those already known. The amount of damage and the importance of the growing industry in new localities demand careful investigation of the insect problem in connection with this crop..... 5,000.00</p> <p>(2) Sugar-cane insect investigations. The statement just made regarding rice insect investigations holds in every detail for sugar-cane insects. No investigation made of this group of crop pests has been made by the Department of Agriculture since 1880, and the culture of this crop has extended in much the same way as has rice culture. This investigation seems to be urgent..... 5,000.00</p> <p>(3) Argentine ant investigations. The damage already done by an ant accidentally introduced into Louisiana, California, and possibly certain other States has increased to such a point as to demand investigation by the bureau. The investigations made by the officials of the States in question have as yet resulted in the discovery of no practical remedy. The insect is an agricultural and horticultural pest</p>	<p><i>General expenses, Bureau of Entomology, 1911 (truck crop and stored product insects), \$16,250—Continued.</i></p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Investigations of insects injurious to truck crops. This project is explained in column 1 of this sheet. Amount allotted..... \$11,250.00</p> <p>(2) Investigations of insects affecting stored grain and other stored products. This project is explained in column 1 of this sheet. Amount allotted..... 5,000.00</p> <p><i>General expenses, Bureau of Entomology, 1911 (southern field crop insects), \$47,000.</i></p> <p>Salaries: In Washington..... \$31,454.00 Out of Washington..... 225.00 Stationery..... 225.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 421.00 Furniture..... 200.00 Fuel..... 75.00 Freight..... 200.00 Express..... 100.00 Telegraph..... 50.00 Telephone..... 125.00 Rent..... 1,300.00 Gas and electricity..... 50.00 Apparatus, instruments, and laboratory material..... 800.00 Travel and station and field expenses..... 12,000.00</p> <p>Total amount of above appropriation (an increase over 1910 of \$5,000)..... 47,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Rice insect investigations. This project is explained in column 1 of this sheet. Amount allotted..... 5,000.00</p> <p>(2) Sugar-cane insect investigations. This project is explained in column 1 of this sheet. Amount allotted..... 5,000.00</p> <p>(3) Argentine ant investigations. This project is explained in column 1 of this sheet. Amount allotted..... 4,000.00</p>	<p><i>General expenses, Bureau of Entomology, 1912 (truck crop and stored product insects), \$19,100—Continued.</i></p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Investigations of insects injurious to truck crops. This project is explained in column 1 of this sheet. Amount estimated..... \$14,100.00</p> <p>(2) Investigations of insects affecting stored grain and other stored products. This project is explained in column 1 of this sheet. Amount estimated..... 5,000.00</p> <p><i>General expenses, Bureau of Entomology, 1912 (southern field crop insects), \$47,160.</i></p> <p>Salaries: In Washington..... \$31,500.00 Out of Washington..... 300.00 Stationery..... 300.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 260.00 Furniture..... 200.00 Fuel..... 75.00 Freight..... 200.00 Express..... 100.00 Telegraph..... 50.00 Telephone..... 125.00 Rent..... 1,300.00 Gas and electricity..... 50.00 Apparatus, instruments, and laboratory material..... 1,000.00 Travel and station and field expenses..... 12,000.00</p> <p>Total amount estimated (an increase over 1911 of \$160)..... 47,160.00</p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:</p> <p>PROJECTS.</p> <p>(1) Rice insect investigations. This project is explained in column 1 of this sheet. Amount estimated..... 5,000.00</p> <p>(2) Sugar-cane insect investigations. This project is explained in column 1 of this sheet. Amount estimated..... 5,000.00</p> <p>(3) Argentine ant investigations. This project is explained in column 1 of this sheet. Amount estimated..... 4,000.00</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Entomology, 1910 (southern field crop insects), \$42,000—Continued.</i>	<i>General expenses, Bureau of Entomology 1911 (southern field crop insects), \$47,000—Cont'd.</i>	<i>General expenses, Bureau of Entomology, 1912 (southern field crop insects), \$47,160—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
to stored foods and to households. It is enormously prolific and breeds under conditions that make it especially difficult to control.....		
(4) Investigations of insects affecting cotton other than the Mexican cotton boll weevil. There are other insects injurious to cotton aside from the boll weevil and the boll worm, which almost annually damage the crop to a certain extent. These are cutworms, sharpshooters, and certain other species, notably the cotton-plant louse, which injures the young cotton plants in the spring. A study of these insects is being made in cooperation with the Texas State Agricultural Experimental Station. Up to the present time very promising results have been obtained, and it is considered important that the investigation be continued.....	(4) Investigations of insects affecting cotton other than the Mexican cotton boll weevil. This project is explained in column 1 of this sheet. Amount allotted....	(4) Investigations of insects affecting cotton other than the Mexican cotton boll weevil. This project is explained in column 1 of this sheet. Amount estimated.....
\$4,000.00	\$2,000.00	\$2,000.00
(5) Investigation of insects affecting tobacco. The investigation of insects affecting tobacco was begun in July, 1907. It was at first confined to the dark-tobacco districts of Kentucky and Tennessee, but has been extended to cover all insects injurious to growing tobacco in the United States as well as certain of those damaging cured tobacco in the warehouses and factories. Experiments in cultural control of certain of the tobacco insects have shown that a very large percentage of the hibernating stages may be killed in this way.....	(5) Investigation of insects affecting tobacco. This project is explained in column 1 of this sheet. Amount allotted.....	(5) Investigation of insects affecting tobacco. This project is explained in column 1 of this sheet. Amount estimated.....
2,000.00	5,000.00	5,000.00
(6) Investigation into the life history of ticks. Under the large emergency appropriation made to the Bureau of Animal Industry, work has been directed toward the eradication of the cattle tick throughout the South. Eradication measures, however, must be based upon a full knowledge of the life history of the cattle tick, and, while this life history is undoubtedly understood in a general way—in fact, well enough understood so that the measures now undertaken by the Bureau of Animal Industry are proving effective—there are still points unascertained which may have, and undoubtedly will have, an important bearing in expediting the practical work; and it is investigations of this kind which have been undertaken by the Bureau of Entomology under this project. Studies of the period in which cattle may be kept in tick-infested areas in the spring without danger of infestation from the seed ticks from eggs hatching when sufficient effective temperature has accumulated have resulted in the establishing of a law which will enable ranchers to determine this period exactly. As a result of careful studies of the incubation period and the longevity of the seed tick, the exact time required to free pastures or other inclosures from ticks, in case the cattle are removed, has been ascertained. The time required at different seasons to free cattle of ticks by placing in an inclosure from which the ticks have been eliminated by starvation or otherwise has also been shown, and studies are being made on the questions of the necessity of double fences, the importance of water courses in the dissemination of ticks, the restriction of the cattle tick to the cattle, and the question as to whether deer and horses and some other animals must be taken into consideration in the practical work of tick eradication are still under investigation. Especial studies have been and are being made of the life histories of other ticks, near relatives of which have been found to carry certain diseases of other domestic animals in other countries, particularly in South Africa, and a beginning has been made of the study of the tick instrumental in the carriage of the spotted fever of human beings in the Northwest....	(6) Investigation into the life history of ticks. This project is explained in column 1 of this sheet. Amount allotted.....	(6) Investigation into the life history of ticks. This project is explained in column 1 of this sheet. Amount estimated.....
5,000.00	6,500.00	6,500.00
(7) Cactus insect investigations. The extensive investigations carried on under the Bureau of Plant Industry concerning the practical use of certain species of cactus as forage have shown that the insect problem as connected with this new use of these plants is a serious one, and the Bureau of Entomology is earnestly requested by the Bureau of Plant Industry to take up this work.....	(7) Cactus insect investigations. This project is explained in column 1 of this sheet. Amount allotted....	(7) Cactus insect investigations. This project is explained in column 1 of this sheet. Amount estimated.....
6,500.00	2,500.00	2,500.00
(8) Mexican cotton boll weevil investigations. The special emergency appropriation for the cotton boll weevil, which covered a large part of the work under this section, was not made for the fiscal year 1909, but the investigations have been continued under the regular appropriation for southern field crop insects. The work during the summer of 1908 in the new regions that have recently been invaded by the cotton boll weevil indicates the absolute necessity for extensive laboratory and field work on this insect under the changed conditions. The work of the bureau in Louisiana and Mississippi has already excited much interest among the planters, and there is an urgent call for the establishment of a permanent laboratory in the delta region and field laboratories at other points. The problem of boll-weevil control becomes in many respects a different one in these regions, and the full knowledge of the life history and habits of the insect gained from equally careful work in the newly infested territory.....	(8) Mexican cotton boll weevil investigations. This project is explained in column 1 of this sheet. Amount allotted.....	(8) Mexican cotton boll weevil investigations. This project is explained in column 1 of this sheet. Amount estimated.....
2,500.00	17,000.00	17,160.00
11,095.09		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p.1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
General expenses, Bureau of Entomology, 1910 (bee culture), \$10,000.	General expenses, Bureau of Entomology, 1911 (bee culture), \$10,000.	General expenses, Bureau of Entomology, 1912 (bee culture), \$11,160.
Salaries: In Washington.....\$7,004.51 Out of Washington.....1,538.66 Stationery.....207.33 Miscellaneous supplies and services, equipment, books, machinery, etc.....400.04 Furniture.....87.67 Freight......25 Express.....7.51 Telegraph......40 Telephone......50 Rent.....30.00 Apparatus, instruments, and laboratory material.....89.99 Travel and station and field expenses.....462.47 Total expenditures to Aug. 31, 1910.....9,829.33 Outstanding liabilities on Aug. 31, 1910 (estimated).....63.49 Balance to be turned back in Treasury (estimated).....107.18	Salaries: In Washington.....\$8,490.00 Out of Washington.....504.00 Stationery.....200.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....100.00 Furniture.....50.00 Freight.....4.00 Express.....8.00 Telegraph.....2.00 Telephone.....2.00 Rent.....180.00 Apparatus, instruments, and laboratory material.....90.00 Travel and station and field expenses.....370.00	Salaries: In Washington.....\$9,250.00 Out of Washington.....504.00 Stationery.....200.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....260.00 Furniture.....50.00 Freight.....4.00 Express.....8.00 Telegraph.....2.00 Telephone.....2.00 Rent.....180.00 Apparatus, instruments, and laboratory material.....200.00 Travel and station and field expenses.....500.00
Total amount of above appropriation.....10,000.00	Total amount of above appropriation.....10,000.00	Total amount estimated (an increase over 1911 of \$1,160).....11,160.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Apicultural investigations. The main problem taken up in this work was an investigation of the brood diseases of bees. These diseases, known as European foul brood and American foul brood, cause an annual direct loss to the bee keepers of the United States which is estimated at over \$2,000,000. This figure does not include the honey crop which is lost in the following year and successive years, nor does it take into consideration the fact that many bee keepers are driven permanently out of the business in regions where the diseases are epidemic. These diseases retard the progress of the industry and often wipe it out in limited regions. Since this subject was taken up, about three years ago, seven publications have been presented on various phases of the work and four more are in preparation. Careful bacteriological work as to the cause of the diseases was necessary before the diseases could be controlled in a logical thorough manner, and for the first time in the history of the bee disease work the cause of one of the diseases, American foul brood, has been established. The cause of European foul brood is being studied, and the bacteria found in the disease have been investigated but the causal relationship has not been determined. The work in diseases has been increased to include a study of the geographical distribution, and it has been found that disease is present in almost every State. The results of this study are being used in an effort to reach the bee keepers in regions where diseases exist to induce them to take the necessary steps to eradicate and control them. Experiments on treatment based on the results of the bacteriological work have been conducted and methods which have proven efficient are now being advised. Further work is being done in an effort to learn methods which can be used at less cost. A detailed study of bee keeping in Massachusetts, Maryland, and Pennsylvania has been conducted to determine the methods now employed, and to devise methods for improving manipulation, so as to produce larger crops of honey. Based on these studies, a general bulletin on bee keeping has been published. Investigations of the structure and development of the honey bee have been conducted, and the results of the anatomical work have been published. Some investigations in certain phases of the behavior of the bee have been conducted, and the results are being prepared for publication. Work of this character is made necessary on account of the many inaccuracies which occur in the previously published accounts, and on account of the necessity for such information in devising practical manipulations. An investigation of the work which is being done in apicultural education in this country and elsewhere, has been begun for the purpose of learning what lines of investigation are most needed in aiding this work.....	(1) Apicultural investigations. This project is explained in column 1 of this sheet. Amount allotted...10,000.00	(1) Apicultural investigations. This project is explained in column 1 of this sheet. Amount estimated11,160.00
9,892.82		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Entomology, 1910 (citrous-fruit insects), \$16,500.</i>	<i>General expenses, Bureau of Entomology, 1911 (citrous-fruit insects), \$21,500.</i>	<i>General expenses, Bureau of Entomology, 1912 (citrous-fruit insects), \$21,500.</i>
Salaries: In Washington.....\$3,935.00 Out of Washington.....6,897.96 Stationery.....37.98 Miscellaneous supplies and services, equipment, books, machinery, etc.....336.43 Furniture.....29.08 Express.....8.85 Telegraph.....8.10 Rent.....480.00 Gas and electricity.....43.00 Apparatus, instruments, and laboratory material.....456.69 Travel and station and field expenses.....2,908.17  Total expenditures to Aug. 31, 1910.....15,141.26 Outstanding liabilities on Aug. 31, 1910 (estimated).....479.32 Balance to be turned back in Treasury (estimated).....879.42  Total amount of above appropriation.....16,500.00	Salaries: In Washington.....\$5,120.00 Out of Washington.....8,000.00 Stationery.....100.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....1,390.00 Furniture.....50.00 Freight.....50.00 Express.....25.00 Telegraph.....15.00 Rent.....500.00 Gas and electricity.....50.00 Apparatus, instruments, and laboratory material.....700.00 Travel and station and field expenses.....5,500.00  Total amount of above appropriation (an increase over 1910 of \$5,000)....21,500.00	Salaries: In Washington.....\$5,120.00 Out of Washington.....8,000.00 Stationery.....100.00 Miscellaneous supplies and services, equipment, books, machinery, etc.....1,390.00 Furniture.....50.00 Freight.....50.00 Express.....25.00 Telegraph.....15.00 Rent.....500.00 Gas and electricity.....50.00 Apparatus, instruments, and laboratory material.....700.00 Travel and station and field expenses.....5,500.00  Total amount estimated.....21,500.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary in prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Scale-insect investigations. Scale insects are among the chief depredators on both deciduous and nondeciduous fruits, and, owing to their close relationship and the similarity of means of control, form a special subject of investigation. This work includes a study of the life history of the insects, means of control artificially by insecticides or by gassing, and natural control by encouraging the multiplication of predaceous and parasitic enemies. In the case of deciduous fruits, the San Jose scale and oyster-shell bark louse and a score of other species of greater or less importance are constantly appearing in orchards previously noninfested, and the giving of special advice and directions as to the means of control is an important feature of the work of this bureau. The more important of these scale pests are under special investigation. This group contains a great many species closely related, some very dangerous and others much less so, and it is of the greatest importance to correctly determine the species in every case. This requires the maintenance of a large type collection which has become, in the course of years, the best collection in the world in this group of insects, and the bureau is looked to as the central source of information for determination for the experiment stations in the United States and for many foreign stations.....4,120.58	(1) Scale-insect investigations. This project is explained in column 1 of this sheet. Amount allotted.....5,000.00	(1) Scale-insect investigations. This project is explained in column 1 of this sheet. Amount estimated.....5,000.00
(2) Hydrocyanic-acid gas investigations. The use of this gas has been the chief means of controlling scale insects on citrus fruit trees in California for many years. During the last two years a thorough investigation of the subject has been in progress by the bureau in California. This investigation was undertaken in response to the demands from the horticultural commissioners of the principal fruit-producing counties of California and of many prominent growers. It has resulted in the introduction of decided improvements and a very large increase in efficiency, and the new and standardized methods have been very generally adopted in the principal citrus-growing regions of California. There remains to complete this investigation the need of some special experimental and demonstrational work in relation to some especially difficult scale insect pests and some collateral work with insecticides, particularly for the mealy bugs, which are more immune to the effect of gas than any other scale insect pest.....5,000.00	(2) Hydrocyanic-acid gas investigations. (This investigation was practically concluded at the close of the fiscal year 1910. No allotment has been deemed necessary for its continuation during the fiscal year 1911.)	(2) Hydrocyanic-acid gas investigations. (This investigation was practically concluded at the close of the fiscal year 1910. No allotment has been deemed necessary for its continuation during the fiscal year 1912, although further demonstration work may be undertaken under the project of scale insects.)
(3) White-fly investigations. The life history work which has been in progress on the white fly in Florida has been substantially completed, and also the very important means of control by fumigation with hydrocyanic-acid gas. In connection with this gas it is very desirable to conduct during the next year further demonstration orchard tests in different parts of the State to thoroughly familiarize orange growers with the details of the process.	(3) White-fly investigations. The life-history work which has been in progress on the white fly in Florida has been substantially completed, and also the very important means of control by fumigation with hydrocyanic-acid gas. In connection with	(3) White-fly investigations. This project is explained in column 2 of this sheet. Amount estimated.....11,500.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<div>General expenses, Bureau of Entomology, 1910 (citrous-fruit insects), \$16,500—Continued.</div> <div>PROJECTS—continued.</div> <div><p>There is now under way a thorough investigation of the means of control of the white fly with insecticide washes in the effort to find, if possible, a method of control which will be as effective and at the same time less expensive than the gas process. Demonstrations and field tests are to be conducted in different parts of the State with important insecticides and with apparatus for their application.</p><p>The study of the three or four important fungous diseases of the white fly should be continued for at least another year to further determine their efficiency and the best means of propagating and establishing them in white-fly infested orchards.</p><p>There are no known parasites of the white fly in this country, and a search for such parasites in the probable native home of the pest in China is very desirable and fully warranted by the probable benefits which can be secured by introducing such parasites. An opportunity offers next year to make an attempt at the discovery and introduction of such natural enemies.....</p></div> <div>\$6,500.00</div>	<div>General expenses, Bureau of Entomology, 1911 (citrous-fruit insects), \$21,500—Continued.</div> <div>PROJECTS—continued.</div> <div><p>this gas it is very desirable to conduct during the next year further demonstration orchard tests in different parts of the State to thoroughly familiarize orange growers with the details of the process.</p><p>There is now under way a thorough investigation of the means of the control of the white fly with insecticide washes in the effort to find, if possible, a method of control which will be as effective and at the same time less expensive than the gas process. Demonstrations and field tests are to be conducted in different parts of the State with important insecticides and with apparatus for their application.</p><p>The study of the three or four important fungous diseases of the white fly should be continued for at least another year to further determine their efficiency and the best means of propagating and establishing them in white-fly infested orchards.</p><p>Under a specific appropriation of \$5,000 an exploration is now in progress to discover the native home or origin of the white fly with the idea of possibly thus finding some natural parasites which will aid in its control in this country. The white fly has already been found abundantly in north-eastern India under conditions which indicate that this is its native habitat and two predaceous enemies have been found there which are now being imported. A further search will be made and these importations will be continued until the efficiency of this means of control has been demonstrated.</p><p>Amount allotted.....</p><p>(4) Insect-inspection work. The Department of Agriculture has become perhaps the largest importing agency in the United States for new plants and seeds. Much of this material comes from the quarters of the world which have never been explored entomologically and with which there has been very little exchange of plant material. All of this material is likely to harbor new insect pests, the introduction of which into the United States might work enormous losses to the existing fruit and other cultures. All such material is therefore most carefully inspected and thoroughly fumigated, and whenever any of it is infested with new enemies the destruction of which can not be assured, it is destroyed outright. During the past year nearly a thousand lots of imported plants were inspected for injurious insects, the largest one of these containing over 5,000 plants. Many of these lots have been fumigated and others have been destroyed and all were given most careful examination. In the course of this work some pests, which threatened to</p></div> <div>\$11,500.00</div>	<div>General expenses, Bureau of Entomology, 1912 (citrous-fruit insects), \$21,500—Continued.</div> <div>PROJECTS—continued.</div> <div><p>(4) Insect - inspection work. This project is explained in column 2 of this sheet. Amount estimated.....</p></div> <div>\$5,000.00</div>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>General expenses, Bureau of Entomology, 1910 (citrous-fruit insects), \$16,500—Continued.</i>	<i>General expenses, Bureau of Entomology, 1911 (citrous-fruit insects), \$21,500—Continued.</i>	<i>General expenses, Bureau of Entomology, 1912 (citrous-fruit insects), \$21,500—Continued.</i>	
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.	
	be very important and dangerous, have been detected and destroyed. Inspection is also made, by request of local nurserymen, of all material shipped from the District of Columbia to adjoining States, as, owing to the laws of these States, no material can pass their borders without a certificate of inspection. Amount allotted.....		
	\$5,000.00		
<i>General expenses, Bureau of Entomology 1910 (miscellaneous insects), \$34,050.</i>	<i>General expenses, Bureau of Entomology, 1911 (miscellaneous insects), \$28,550.</i>	<i>General expenses, Bureau of Entomology, 1912 (miscellaneous insects), \$19,740.</i>	
Salaries:	Salaries:	Salaries:	
In Washington.....	In Washington.....	In Washington.....	
Out of Washington.....	Out of Washington.....	Out of Washington.....	
Stationery.....	Stationery.....	Stationery.....	
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....	
Furniture.....	Furniture.....	Furniture.....	
Freight.....	Freight.....	Freight.....	
Express.....	Express.....	Express.....	
Telegraph.....	Telegraph.....	Telegraph.....	
Telephone.....	Telephone.....	Telephone.....	
Rent.....	Rent.....	Rent.....	
Apparatus, instruments, and laboratory material.....	Apparatus, instruments, and laboratory material.....	Apparatus, instruments, and laboratory material.....	
Travel and station and field expenses.....	Travel and station and field expenses.....	Travel and station and field expenses.....	
Total expenditures to Aug. 31, 1910.....			
Outstanding liabilities on Aug. 31, 1910 (estimated).....			
Balance to be turned back in Treasury (estimated).....			
	Total amount of above appropriation (a decrease from 1910 of \$5,500)...	Total amount estimated (a decrease from 1911 of \$8,810).....	
	28,550.00	19,740.00	
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:	
PROJECTS.	PROJECTS.	PROJECTS.	
(1) Importation of useful insects. Under the head of this project efforts are being made, largely in Europe, to import the parasites of such injurious foreign insects as have become acclimatized in this country. The importation of the parasites of the gipsy moth and the brown-tail moth are considered under a separate project as a part of the special emergency appropriation to prevent the further spread of the gipsy moth and the brown-tail moth. Aside from this, specific efforts are being made in Europe to secure the parasites of the codling moth and large numbers of wintering cocoons of this insect are being sent from parts of Germany with the hope of rearing the parasites in this country and distributing them in American orchards. Efforts are also being made to import the recently discovered European parasites of the imported elm-leaf beetle from portions of France. In addition to these items search is still being made, as opportunity offers, for Central American parasites of the cotton boll weevil, and, by the help of correspondents, for Asiatic parasites of scale insects supposed to have been imported into this country. Importations are also being made from Europe of beneficial ladybird beetles that feed upon plant lice. Other beneficial insects are being searched for and imported where possible.....	(1) Importation of useful insects. This project is explained in column 1 of this sheet. Amount estimated.....	3,500.00	
(2) Investigation of insects in their direct relation to the health of man. Investigations have been continued of the distribution, life history, and remedies against mosquitoes that carry disease, especially the different mosquitoes of the genus <i>Anopheles</i> that have been proved to carry malaria, and the other species of the same genus that are inferentially supposed to have the same disease-bearing potentiality. Similar work has been done and is being done upon the distribution in this country of the yellow-fever mosquito. The house fly, the agency of which in the carriage of typhoid fever has been abundantly	(2) Investigation of insects in their direct relation to the health of man. This project is explained in column 1 of this sheet. Amount allotted.....	(2) Investigation of insects in their direct relation to the health of man. This project is explained in column 1 of this sheet. Amount estimated.....	2,000.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p>General expenses, Bureau of Entomology, 1910 (miscellaneous insects), \$34,050—Continued.</p> <p>PROJECTS—continued.</p> <p>demonstrated, has been and will be studied on a large scale with reference to its destruction. Studies are also being made of fleas and other forms concerned in the carriage of bubonic plague and other maladies. . . .</p> <p>(3) Experimental work with insecticides. Enormous advances have been made in the knowledge of the use of insecticides for various insect pests during the last score of years, and their employment has become almost universal among the fruit and truck growers, and, in fact, in all the relations of insect pests to agriculture. The annual expenditure in the United States for insecticide materials and the cost of their application is enormous. The spraying of the apple alone probably costs upward of \$8,000,000 a year, on the basis of such treatment, for a little more than half of the producing trees. Most commercial orchards are sprayed now for the San Jose scale and other pests, and enormous expenditures are made annually in the case of truck crops. The experimental work of the bureau with insecticides is to determine the most efficient of these remedies and the most economical means of applying them, and to exploit the information gained by demonstrational work wherever such is needed. The experience of every year improves the methods and increases the efficiency. The field tests and demonstration work of the bureau with insecticides is divided up among the appropriate sections of the work of the bureau. In cooperation with the Bureau of Chemistry, old and new arsenical and other mixtures are examined and tested to determine purity and utility. In the same way new proprietary insecticides which are being exploited in numbers every year are, whenever they show evidences of real value, subjected to field demonstration tests by this bureau, and made the subject of chemical examination by the Bureau of Chemistry. . . .</p> <p>(4) Miscellaneous investigations and other work. Under the head of miscellaneous investigations and other work there are a number of insects of economic importance whose damage is not so great as that of those placed in the first class, which are constantly under observation and of which more or less extensive investigations are being made. For example, the subject of insects injurious to shade trees and ornamental plants has been under investigation for some years, with the idea of eventually publishing an extensive practical report on this subject. The circulars of information giving the results of investigations of individual pests of this class are now being published, and others are under way. Every year some new pest comes under this miscellaneous project. Emergencies arising under other projects are also supplied from this item of reserve from time to time as additional allotment seems necessary. The amount allotted covers traveling expenses, laboratory supplies, and the employment of temporary assistants in investigations of insects of this class. . . .</p> <p>Preventing spread of moths, Bureau of Entomology, 1910, \$300,000.</p> <p>Salaries: In Washington. . . . \$8,045.00 Out of Washington. . . . 222,234.55 Stationery. . . . 159.80 Miscellaneous supplies and services, equipment, books, machinery, etc. . . . 20,553.63 Furniture. . . . 79.50 Freight. . . . 6.00 Express. . . . 38.26 Telegraph. . . . 29.26 Telephone. . . . 194.27 Rent. . . . 926.62 Apparatus, instruments, and laboratory material. . . . 4,298.93 Travel and station and field expenses. . . . 10,761.83</p> <p>Total expenditures to Aug. 31, 1910. . . . 267,327.65 Outstanding liabilities on Aug. 31, 1910 (estimated). . . . 8,649.50 Balance to be turned back in Treasury (estimated). . . . 24,022.85</p> <p>Total amount of above appropriation. . . . 300,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Entomology. This work was divided into the following projects:</p>	<p>General expenses, Bureau of Entomology, 1911 (miscellaneous insects), \$28,550—Continued.</p> <p>PROJECTS—continued.</p> <p>(3) Experimental work with insecticides. This project is explained in column 1 of this sheet. Amount allotted. . . . \$3,000.00</p> <p>(4) Miscellaneous investigations and other work. This project is explained in column 1 of this sheet. Amount allotted. . . . 20,050.00</p> <p>Preventing spread of moths, Bureau of Entomology, 1911, \$300,000.</p> <p>Salaries: In Washington. . . . \$6,800.00 Out of Washington. . . . 270,000.00 Stationery. . . . 250.00 Miscellaneous supplies and services, equipment, books, machinery, etc. . . . 4,300.00 Furniture. . . . 200.00 Freight. . . . 100.00 Express. . . . 100.00 Telegraph. . . . 50.00 Telephone. . . . 200.00 Rent. . . . 1,000.00 Apparatus, instruments, and laboratory material. . . . 5,000.00 Travel and station and field expenses. . . . 12,000.00</p> <p>Total amount of above appropriation. . . . 300,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Entomology. This work is divided into the following projects:</p>	<p>General expenses, Bureau of Entomology, 1912 (miscellaneous insects), \$19,740—Continued.</p> <p>PROJECTS—continued.</p> <p>(3) Experimental work with insecticides. This project is explained in column 1 of this sheet. Amount estimated. . . . \$3,000.00</p> <p>(4) Miscellaneous investigations and other work. This project is explained in column 1 of this sheet. Amount estimated. . . . 11,240.00</p> <p>Preventing spread of moths, Bureau of Entomology, 1912, \$284,840.</p> <p>Salaries: In Washington. . . . \$4,400.00 Out of Washington. . . . 257,240.00 Stationery. . . . 250.00 Miscellaneous supplies and services, equipment, books, machinery, etc. . . . 4,300.00 Furniture. . . . 200.00 Freight. . . . 100.00 Express. . . . 100.00 Telegraph. . . . 50.00 Telephone. . . . 200.00 Rent. . . . 1,000.00 Apparatus, instruments, and laboratory material. . . . 5,000.00 Travel and station and field expenses. . . . 12,000.00</p> <p>Total amount estimated (a decrease from 1911 of \$15,160). . . . 284,840.00</p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestions of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Entomology. This work will be divided into the following projects:</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Entomology—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Preventing spread of moths, Bureau of Entomology, 1910, \$300,000—Continued.</i>	<i>Preventing spread of moths, Bureau of Entomology, 1911, \$300,000—Continued.</i>	<i>Preventing spread of moths, Bureau of Entomology, 1912, \$284,840—Continued.</i>
PROJECTS.	PROJECTS.	PROJECTS.
(1) Introduction of parasites from abroad and their care in this country. (A portion of the expense attached to this parasite work is borne by the State of Massachusetts).....	(1) Introduction of parasites from abroad and their care in this country. This project is explained in column 1 of this sheet. Amount allotted.....	(1) Introduction of parasites from abroad and their care in this country. This project is explained in column 1 of this sheet. Amount estimated.....
\$10,000.00	\$15,000.00	\$25,000.00
(2) Active measures for the destruction of the gypsy moth in newly infested territory and in limiting its spread. These measures for the most part are mechanical, necessitating the employment of a large force of unskilled laborers throughout the entire year.....	(2) This project is explained in column 1 of this sheet. Amount allotted.....	(2) This project is explained in column 1 of this sheet. Amount estimated.....
265,977.15	285,000.00	259,840.00
Total of all appropriations for Bureau of Entomology.....	Total of all appropriations for Bureau of Entomology (an increase over 1910 of \$4,500).....	Total amount estimated for Bureau of Entomology (an increase over 1911 of \$50,900) ..
527,680.00	532,180.00	583,080.00
Total expenditures to Aug. 31, 1910.....		
482,674.52		
Outstanding liabilities on Aug. 31, 1910 (estimated).....		
13,638.73		
Balance to be turned back in Treasury (estimated).....		
31,366.75		

BUREAU OF BIOLOGICAL SURVEY.

<i>Salaries, Bureau of Biological Survey, 1910, \$13,000.</i>	<i>Salaries, Bureau of Biological Survey, 1911, \$15,400.</i>	<i>Salaries, Bureau of Biological Survey, 1912, \$25,100.</i>
Henshaw, H. W.....} Chief of bureau, at \$3,000.....{	1 biologist, who shall be chief of bureau.....	1 biologist, who shall be chief of bureau (increase of \$1,500 submitted).....
2,750.00	\$3,000.00	\$4,500.00
Brewster, C. E.....} Clerk, class 4.....{	1 clerk, class 4.....	1 clerk, class 4.....
1,800.00	1,800.00	1,800.00
Thompson, E. J.....} Clerk, class 2.....{	1 clerk, class 2.....	1 clerk clerk (by transfer from lump fund for general expenses, administrative expenses, with change of title)...
1,400.00	1,400.00	1,800.00
Milligan, C. B.....} Clerk, class 1.....{	2 clerks, class 1.....	1 clerk, class 2.....
1,180.00	2,400.00	1,400.00
Earnshaw, F. L.....} Clerk, at \$1,000.....{	1 photographer.....	4 clerks, class 1 (increase of 2 submitted).....
972.22	1,200.00	4,800.00
Maxon, May C.....} Clerk, at \$1,000.....{	2 clerks, at \$1,000 each.....	3 clerks, at \$1,000 each (increase of 1 submitted by transfer from lump fund for general expenses, game preservation)...
1,000.00	2,000.00	3,000.00
Mindeleft, Natalia V.....} Clerk, at \$900.....{	2 clerks, at \$900 each.....	2 clerks, at \$900 each.....
827.50	1,800.00	1,800.00
Winfield, A. M.....} Clerk, at \$900.....{	1 messenger.....	1 photographer (increase of \$200 submitted).....
900.00	720.00	1,400.00
Rousseau, Geo. W.....} Messenger, at \$720.....{	1 messenger or laborer.....	1 warden (by transfer from lump fund for general expenses, maintenance of mammal and bird reservations).....
300.00	480.00	1,200.00
Ward, L. C.....} Laborer, at \$480.....{	1 laborer.....	1 messenger.....
420.00	600.00	720.00
Loftin, Ella.....} Laborer, at \$480.....{		1 messenger, messenger boy, or laborer (change of title submitted).....
480.00		480.00
Fisher, Della.....} Laborer, at \$600.....{		1 laborer.....
600.00		600.00
Total.....		
12,879.72		
Unexpended balance.....		
120.28		
Total amount of above appropriation.....	Total amount of above appropriation (an increase over 1910 of \$2,400) ...	Total amount estimated (an apparent increase over 1911 of \$9,700) ...
13,000.00	15,400.00	25,100.00

NOTE.—An increase of \$9,700 is submitted. Of this sum \$4,000 covers the transfer of 3 employees from the lump-fund roll for general expenses, which fund has been reduced accordingly; \$4,000 is to provide for three new places; \$1,700 is for promotions, of which \$1,500 is for an increase in the salary of the chief of bureau, which is well deserved, and will make it more nearly agree with the salaries of other chiefs of bureaus in the departmental service, and \$200 for increasing the salary of 1 photographer. The changes in detail are as follows:

Transfers from lump fund for general expenses:

1 employee from administrative expenses..... 1,800.00

1 employee from maintenance of mammal and bird reservations..... 1,200.00

1 employee from game preservation..... 1,000.00

Promotions:

1 chief of bureau..... 1,500.00

1 photographer..... 200.00

New places:

1 clerk, class 3..... 1,600.00

2 clerks, class 1..... 2,400.00

9,700.00

Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.		Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Bureau of Biological Survey, 1910, \$13,000—Continued.</i>		<i>Salaries, Bureau of Biological Survey, 1911, \$13,400—Continued.</i>		<i>Salaries, Bureau of Biological Survey, 1912, \$23,100—Continued.</i>	
The above force performed the following duties:		The above force is performing the following duties:		The above force will perform the following duties:	
Administrative:		Administrative and executive:		Administrative and executive:	
1 chief of bureau.....	\$3,000.00	1 chief of bureau.....	3,000.00	1 chief of bureau....	\$4,500.00
1 clerk, class 4.....	1,800.00			1 chief clerk.....	1,800.00
2 clerks, at \$900 each.....	1,800.00				\$6,300.00
1 messenger.....	720.00				
1 messenger and laborer.....	480.00				
1 laborer.....	600.00				
	<u>\$8,400.00</u>				
Office files:		Correspondence, files,		Correspondence, files,	
1 clerk, class 2.....	1,400.00	and records:		and records:	
Correspondence:		1 clerk, class 4.....	\$1,800.00	1 clerk, class 4.....	1,800.00
1 clerk, class 1.....	1,200.00	1 clerk, class 2.....	1,400.00	1 clerk, class 3.....	1,600.00
2 clerks, at \$1,000.....	2,000.00	2 clerks, class 1, at \$1,200 .....	2,400.00	1 clerk, class 2.....	1,400.00
	<u>3,200.00</u>	1 photographer.....	1,200.00	4 clerks, class 1, at \$1,200 each.....	4,800.00
		2 clerks, at \$1,000...	2,000.00	3 clerks, at \$1,000 each.....	3,000.00
		2 clerks, at \$900.....	1,800.00	2 clerks, at \$900 each.....	1,800.00
			<u>\$10,600.00</u>	1 photographer....	1,400.00
		Messenger and labor service:			15,800.00
		1 messenger.....	720.00	Warden service:	
		1 messenger or la- borer.....	480.00	1 warden.....	1,200.00
		1 laborer.....	600.00	Messenger and labor service:	
			<u>1,800.00</u>	1 messenger.....	720.00
	<u>13,000.00</u>			1 messenger or la- borer.....	480.00
				1 laborer.....	600.00
					<u>1,800.00</u>
					<u>25,100.00</u>
<i>General expenses, Bureau of Biological Survey, 1910 (game preservation), \$9,420.</i>		<i>General expenses, Bureau of Biological Survey, 1911 (game preservation), \$9,420.</i>		<i>General expenses, Bureau of Biological Survey, 1912 (game preservation), \$13,000.</i>	
Lump-fund salaries in Washington.....	\$4,979.16	Lump-fund salaries in Wash- ington.....	\$3,500.00	Lump-fund salaries in Washing- ton.....	\$4,000.00
Lump-fund salaries outside of Washington.....	695.00	Lump-fund salaries outside of Washington.....	1,500.00	Lump-fund salaries outside of Washington.....	2,500.00
Stationery.....	391.16	Stationery.....	200.00	Stationery.....	200.00
Miscellaneous supplies and services, equipment, books, etc.....	568.56	Miscellaneous supplies and serv- ices, equipment, books, etc.....	1,350.00	Miscellaneous supplies and serv- ices, equipment, books, etc....	2,000.00
Furniture.....	180.02	Furniture.....	200.00	Furniture.....	200.00
Telegraph.....	30.04	Telegraph.....	50.00	Telegraph.....	80.00
Telephone.....	10.12	Telephone.....	20.00	Telephone.....	20.00
Apparatus, instruments, and laboratory material.....	79.00	Apparatus, instruments, and labo- ratory material.....	100.00	Apparatus, instruments, and labo- ratory material.....	200.00
Travel and station and field expenses.....	1,032.62	Travel and station and field ex- penses.....	2,500.00	Travel and station and field ex- penses.....	3,800.00
Total expenditures to Aug. 31, 1910.....	7,965.68			Total amount estimated (an increase over 1911 of \$3,580) .....	13,000.00
Outstanding liabilities on Aug. 31, 1910.....	362.73	Total amount of above appropriation.....	9,420.00		
Balance to be turned back in Treasury (estimated).....	1,091.59			Note.—The above esti-	
Total amount of above appropriation.....	9,420.00			mates of expenditures, classi-	
				fied in accordance with the	
				suggestion of the congressio-	
				nal committee on expendi-	
				tures for this department,	
				have been submitted as neces-	
				sary for prosecuting the im-	
				portant work of the Bu-	
				reau of Biological Survey re-	
				lating to game preservation. This work will fall naturally under the following projects:	
PROJECTS.		PROJECTS.		PROJECTS.	
(19) Supervision over the importation of foreign mam- mals and birds.....	1,168.31	(19) Supervision over the im- portation of foreign mam- mals and birds.....	1,300.00	(19) Supervision over the im- portation of foreign mam- mals and birds.....	2,500.00
The object of this work is to prevent (under act of Congress) the introduction into the United States of injurious birds and mammals.					
(20) Publication of information concerning game and birds.....	1,108.00	(20) Publication of informa- tion concerning game and birds.....	2,200.00	(20) Publication of informa- tion concerning game and birds.....	4,000.00
The compilation, publication, and distribution of information concerning game laws, interstate com- merce in game, and concerning the value, preserva- tion, and propagation of game and nongame birds.					
(21) Protection of game and birds.....	2,424.92	(21) Protection of game and birds.....	3,720.00	(21) Protection of game and birds.....	4,000.00
To secure enforcement of the Lacey Act and regu- lations concerning the interstate shipment of game, including cooperation with State game wardens and United States marshals. Evidence of viola-					

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912. and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Biological Survey, 1910 (game preservation), \$9,420—Continued.</i>	<i>General expenses, Bureau of Biological Survey, 1911 (game preservation), \$9,420—Continued.</i>	<i>General expenses, Bureau of Biological Survey, 1912 (game preservation), \$13,000—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
tion of Federal game laws are transmitted to the Department of Justice and to State officials, and expert testimony given when necessary.		
(22) Supervision of bird and game reservations and game refuges. .... \$986.60		
The Biological Survey is charged with the oversight of areas set apart under executive orders as breeding refuges for birds and game mammals in danger of extinction.		
(Future expenditures under this project will appear under the appropriation for "Maintenance of mammal and bird reservations.")		
(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other expenditures in Washington ..... 2,440.58	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other expenditures in Washington..... \$2,100.00	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other expenditures in Washington. .... \$2,500.00
(35) Introduction and rearing of imported pheasants. No expenditure; project completed.		
The object of this project is to gather information for a bulletin on the introduction, present distribution in the United States, and best methods of rearing imported pheasants for game preserves and aviaries.		
(41) Investigation of the English starling..... 200.00	(41) Investigation of the English starling..... 100.00	
The introduction several years ago of the English starling into the eastern United States and its subsequent increase and spread threatens the country with another bird pest unless prompt measures for its restriction are undertaken. It is proposed to investigate the matter thoroughly in order to learn the present distribution, abundance, and habits of the species in this country, so that means may be found for destroying the pests before too numerous.		
<i>General expenses, Bureau of Biological Survey, 1910 (maintenance of mammal and bird reservations), \$7,000.</i>	<i>General expenses, Bureau of Biological Survey, 1911 (maintenance of mammal and bird reservations), \$7,000.</i>	<i>General expenses, Bureau of Biological Survey 1912 (maintenance of mammal and bird reservations), \$13,800.</i>
Lump-fund salaries outside of Washington..... \$3,469.50	Lump-fund salaries outside of Washington..... \$4,000.00	Lump-fund salaries outside of Washington..... \$5,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,372.68	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,500.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 5,000.00
Freight..... 36.00	Freight..... 25.00	Freight..... 500.00
Travel and station and field expenses..... 1,325.97	Travel and station and field expenses..... 1,475.00	Travel and station and field expenses..... 3,300.00
Total expenditures to Aug. 31, 1910..... 6,204.15		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 78.09		
Balance to be turned back in Treasury (estimated)..... 717.76		
Total amount of above appropriation..... 7,000.00	Total amount of above appropriation..... 7,000.00	Total amount estimated (an increase over 1911 of \$6,800)..... 13,800.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Biological Survey in connection with the maintenance of mammal and bird reservations. This work naturally fell under the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Biological Survey in connection with the maintenance of mammal and bird reservations. This work naturally falls under the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures in this department, have been submitted as necessary in prosecuting the important work of the Bureau of Biological Survey in connection with the maintenance of mammal and bird reservations. This work will naturally fall under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(22) Supervision of bird and game reservations and game refuges..... 2,469.50	(22) Supervision of bird and game reservations and game refuges..... 3,000.00	(22) Supervision of bird and game reservations and game refuges..... 10,000.00
The Biological Survey is charged with the oversight of areas set apart by presidential proclamation of act of Congress as breeding refuges for birds and game mammals in danger of extinction.		
(33) Supervision of the national bison herd in Montana..... 3,812.74	(33) Supervision of the national bison herd in Montana..... 4,000.00	(33) Supervision of the national bison herd in Montana..... 3,800.00
The purchase and fencing of a buffalo range in Montana was authorized by Congress in 1908, and the supervision of this range and the buffalo herd has been placed in charge of the Biological Survey.		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1232); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Biological Survey, 1910 (food habits of birds and mammals), \$25,000.</i>	<i>General expenses, Bureau of Biological Survey, 1911 (food habits of birds and mammals), \$25,000.</i>	<i>General expenses, Bureau of Biological Survey, 1912 (food habits of birds and mammals), \$35,000.</i>
Lump-fund salaries in Washington..... \$14,829.71	Lump-fund salaries in Washington..... \$16,000.00	Lump-fund salaries in Washington..... \$23,000.00
Lump-fund salaries out of Washington..... 933.33	Stationery..... 200.00	Stationery..... 90.00
Stationery..... 132.65	Miscellaneous supplies and services, equipment, books, etc..... 1,650.00	Miscellaneous supplies and services, equipment, books, etc..... 1,800.00
Miscellaneous supplies and services, equipment, books, etc..... 1,158.09	Furniture..... 300.00	Furniture..... 500.00
Furniture..... 235.55	Telegraph..... 25.00	Telegraph..... 75.00
Telegraph..... 19.90	Telephone..... 25.00	Telephone..... 35.00
Apparatus, instruments, and laboratory material..... 485.19	Apparatus, instruments, and laboratory material..... 300.00	Apparatus, instruments, and laboratory material..... 500.00
Travel and station and field expenses..... 5,317.75	Travel and station and field expenses..... 6,500.00	Travel and station and field expenses..... 9,000.00
Total expenditures to Aug. 31, 1910..... 23,112.17		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 556.94		
Balance to be turned back in Treasury (estimated)..... 1,330.89		
<b>Total amount of above appropriation..... 25,000.00</b>	<b>Total amount of above appropriation..... 25,000.00</b>	<b>Total amount estimated (an increase over 1911 of \$10,000)..... 35,000.00</b>
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Biological Survey in connection with its investigations of the food habits of birds and mammals. This work fell naturally under the following projects:	NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Bureau of Biological Survey in connection with its investigations of the food habits of birds and mammals. This work falls naturally under the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Bureau of Biological Survey in connection with its investigations of the food habits of birds and mammals. This work will fall naturally under the following projects:
<b>PROJECTS.</b>	<b>PROJECTS.</b>	<b>PROJECTS.</b>
(9) Investigations of the food habits of birds..... 4,101.27	(9) Investigations of the food habits of birds to determine their economic status in relation to agriculture and horticulture..... 7,550.00	(9) Investigations of the food habits of birds to determine their economic status in relation to agriculture and horticulture..... 10,000.00
The work chiefly includes laboratory investigations of bird stomachs and preparation of records and office files concerning the food of native birds in order to publish such information for the benefit of farmers and fruit growers. In this manner the beneficial and injurious species may be distinguished and means taken to protect the useful birds and minimize the injury from the harmful kinds.	(Projects heretofore known as Nos. 10, 14, 29, 31, 32, 50, 51, 52, and 59 are now consolidated under project No. 9.)	
(10) Investigations into the relation of birds to the cotton boll weevil. (No expenditure.)		
The purpose of this project is to learn what kinds of birds feed upon the boll weevil, with a view to the protection of such birds by law. Also to devise means for the extension of the range and increase in the numbers of these useful kinds in parts of the cotton belt where they are scarce or wanting. Reports of progress are published and distributed in the cotton-growing areas.		
(13) Investigation of the food of land game birds of the United States. (No expenditure.)		
Investigations are conducted to determine the relations of game birds to agriculture, their usefulness in destroying noxious insects and weed seeds, aside from their value as food.		
(14) Investigation of the food of aquatic game birds..... 1,096.78		
The object of this work is to secure accurate knowledge concerning the food and food habits of wild ducks, geese, and other waterfowl as an aid to the preservation of these valuable birds and the stocking of ponds and waterways from which they are now absent. Also to furnish information as a basis for protective legislation.		
(17) Investigation into the relations of mammals to agriculture..... 3,702.65	(17) Investigations to determine the relations of our native mammals to agriculture and to perfect methods of destroying the injurious species..... 13,200.00	(17) Investigations to determine the relations of our native mammals to agriculture and to perfect methods of destroying the injurious species..... 18,000.00
This covers the administration and routine work together with general investigations of the relations to agriculture of wild mammals, especially rodents and carnivores.	(Projects heretofore known as Nos. 24, 25, 34, 38, 39, 40, 42, 46, 49, 53, and 58 are now consolidated under project No. 17.)	
(24) Destruction of ground squirrels in Washington, Oregon, and Idaho, including study of bacterial diseases..... 50.00		
To discover by field investigation the best and cheapest method by which the farmers of the Northwestern States can protect grain and other crops from ground squirrels. Both field and laboratory work are necessary.		
(25) Inquiry into the relation of wolves to stock raising. (No expenditure.)		
Field investigations into the extent of the damage to range stock from wolves, including study of the breeding and other habits, with a view to discovering the best methods of protection. Includes experiments with wire fencing.		
(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 3,770.05	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 3,000.00	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 3,000.00
(29) Field work in eastern United States in relation to birds and small fruits. (No expenditure.)		
A field study of the food habits of birds which eat cultivated fruits in the eastern United States, with		

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## Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Biological Survey, 1910 (food habits of birds and mammals), \$25,000—Continued.</i>	<i>General expenses, Bureau of Biological Survey, 1911 (food habits of birds and mammals), \$25,000—Continued.</i>	<i>General expenses, Bureau of Biological Survey, 1912 (food habits of birds and mammals), \$35,000—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
the object of discovering methods of reducing the losses to the fruit growers from this source.		
(31) Relation of woodpeckers to forestry and agriculture.....	\$785.00	
This work consists of field and laboratory investigations of the food and habits of woodpeckers, with special reference to their relations to the important subject of forest preservation.		
(32) Extermination of the English sparrow in southern California. (No expenditure.)		
Cooperation with the local authorities of the counties in southern California to prevent the further spread of the English sparrow in that region and to exterminate the colonies of these pests which have already gained a foothold.		
(34) Gophers in relation to agriculture.....	200.00	
The object of this project is to learn the distribution of these extremely destructive mammals and the amount of damage done to agriculture by them. Experiments are conducted to determine the cheapest and most effective method of destroying them.		
(38) Destruction of ground squirrels in California.....	2,085.00	
Experimental and demonstration work in destroying California ground squirrels, always serious enemies of agriculture and recently discovered to be carriers of plague.		
(39) Field mice investigations.....	64.55	
Investigations, experiments, and demonstration work for the purpose of reducing to a minimum the recurrence of mouse plagues with accompanying serious losses.		
(40) Relation of rabbits to agriculture. (No expenditure.)		
In large areas of the United States rabbits are extremely destructive to crops, nurseries, and fruit trees. The habits and distribution of the various species are being studied in order to devise effective methods for their destruction. Effort is being made to secure cultures of the diseases which periodically attack rabbits and practically exterminate them over wide areas.		
(42) Experimental and demonstration work in destroying ground squirrels, field mice, and other noxious mammals in the national forests, game preserves, and elsewhere.....	2,754.83	
The national forests, national parks, and bird reservations are infested with numerous mammals which are extremely destructive to nursery and forest trees, pasturage, and other vegetation, and largely reduce the value and revenue from these sources. Hence the need of a thorough study of these pests. In addition to destroying them on the public domain it is planned to demonstrate to those interested the most effective means of controlling these mammals.		
(43) Field study of the birds of Oregon and Washington in relation to fruit growing and agriculture.....	1,601.70	
A field study of the food habits of birds in the rapidly developing fruit-growing region of the extreme Northwest is necessary in order to supply the fruit growers with needed information for the protection of their crops.		
(46) Destruction of house rats.....	387.45	
To devise means for the destruction or control of these noxious rodents, which not only cause enormous annual losses, but are known to be the main disseminators of the plague and other diseases.		
(49) Investigating food habits of moles.....	259.65	
To ascertain definitely the economic status of the mole by investigation of its food habits and the discovery of methods of controlling its depredations.		
(50) Food of flycatchers.....	900.00	
To investigate the food habits of the members of the group with reference to their economic status.		
(51) Food, distribution, and migration of wading birds. (No expenditure.)		
To investigate the distribution and migration routes of the waders with reference to protective legislation and the establishment of open and close seasons.		
(52) Food of swallows in relation to agriculture. (No expenditure.)		
To study the food of this group with reference to their exact economic status.		
(53) Protection of embankments and irrigation ditches from burrowing animals.....	496.10	
To discover and demonstrate to engineers, farmers, and others concerned cheap and effective methods of destroying dike borers, like gophers, muskrats, and others.		
(54) Miscellaneous investigations.....	1,414.08	
	(54) Miscellaneous investigations.....	
	\$1,250.00	(54) Miscellaneous investigations.....
		\$4,000.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1232); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General expenses, Bureau of Biological Survey, 1910" (biological investigations), \$18,000.</i>	<i>"General expenses, Bureau of Biological Survey, 1911" (biological investigations), \$18,000.</i>	<i>"General expenses, Bureau of Biological Survey, 1912" (biological investigations), \$25,000.</i>
Lump-fund salaries in Washington..... \$10,599.51	Lump-fund salaries in Washing- ton..... \$14,750.00	Lump-fund salaries in Washing- ton..... \$18,500.00
Lump fund salaries outside of Washington..... 862.50	Stationery..... 50.00	Stationery..... 100.00
Stationery..... 26.02	Miscellaneous supplies and serv- ices, equipment, books, machin- ery, etc..... 500.00	Miscellaneous supplies and serv- ces, equipment, books, machin- ery, etc..... 2,000.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 812.28	Furniture..... 100.00	Furniture..... 200.00
Furniture..... 6.75	Express..... 25.00	Express..... 50.00
Express..... .80	Telegraph..... 25.00	Telegraph..... 25.00
Apparatus, instruments, and laboratory material..... 56.99	Apparatus, instruments, and lab- oratory material..... 50.00	Apparatus, instruments, and laboratory material..... 125.00
Travel and station and field expenses..... 4,845.71	Travel and station and field ex- penses..... 2,500.00	Travel and station and field ex- penses..... 4,000.00
Total expenditures to Aug. 31, 1910..... 17,210.56		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 315.33		
Balance to be turned back in Treasury (estimated)..... 474.11		
Total amount of above appropriation..... 18,000.00	Total amount of above appropriation..... 18,000.00	Total amount estimated (an increase over 1911 of \$7,000)..... 25,000.00
NOTE.—The above expenditures, classified in accord- ance with the suggestion of the congressional com- mittee on expenditures for this department, were necessary in prosecuting the important work of the Bureau of Biological Survey in connection with the biological surveys of the States and Territories. This work fell naturally under the following projects:	NOTE.—The above expendi- tures, classified in accordance with the suggestion of the con- gressional committee on ex- penditures for this department, are being incurred in prosecut- ing the important work of the Bureau of Biological Survey in connection with the biologi- cal surveys of the States and Territories. This work falls naturally under the following projects:	NOTE.—The above esti- mates of expenditures, classi- fied in accordance with the suggestion of the congress- sional committee on expendi- tures for this department, have been submitted as neces- sary for prosecuting the im- portant work of the Bureau of Biological Survey in con- nection with the biological surveys of the States and Ter- ritories. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(1) Preparation for publication of reports and maps relating to life and crop zones..... 7,475.86 This project includes the preparation of maps and reports relating to life and crop zones of the several States and Territories, and the country as a whole; also maps showing the distribution of our native birds and mammals. These maps serve as guides in selecting crops; in locating areas in- habited by the various beneficial and noxious ani- mals; and in framing legislation for the protection of beneficial species, including game birds and mammals.	(1) Preparation for publica- tion of reports and maps relating to life and crop zones..... 7,000.00	(1) Preparation for publica- tion of reports and maps relating to life and crop zones..... 7,500.00
(2) Biological survey of California..... 1,605.20 Objects same as in Project 1.	(2) Biological survey of the States and Territories..... 7,500.00 This project includes biological surveys of the various States and Ter- ritories for the purpose of gathering material for maps and reports on the life and crop zones, and on the distribution and habits of mammals and birds. (Projects Nos. 3, 4, 8, 36, 37, 44, and 45 have been consolidated under this one project.)	(2) Biological survey of the States and Territories..... 12,500.00
(3) Biological survey of New Mexico. (Completed. No expenditure.) For the purpose of gathering material for maps and reports on the life and crop zones of this Terri- tory, similar in scope to Projects 1 and 2.		
(4) Biological survey of Colorado..... 525.83 Completed with this fiscal year. Objects as in Projects 1, 2, and 3.		
(8) Biological survey of Alaska. (No expenditure.) Includes study of the distribution of birds, mam- mals, and plants for the preparation of reports and maps showing the life zones of the Territory. Also study of abundance, distribution, and habits of game birds and mammals in connection with the establishment of game refuges and collection of information relative to the raising of fur-bearing mammals for profit, and data on which laws for the protection of game in that region may be based.		
(16) Investigation into the migration of birds..... 1,485.00 The work consists mainly in compilation of data on the times and routes of migration of American birds, such knowledge furnishing a basis for pro- tective legislation and for open and close seasons. The observations on which this work is based are largely furnished by voluntary and unpaid observ- ers in many parts of the United States.	(16) Investigation into the migration of birds..... 1,600.00	(16) Investigation into the migration of birds..... 2,000.00
(28) Expenses for administration, including contin- gent and miscellaneous expenses, labor, and other general expenditures in Washington..... 1,063.88	(28) Expenses for administra- tion, including contingent and miscellaneous expenses, labor, and other general ex- penditures in Washington.. 900.00	(28) Expenses for adminis- tration, including contin- gent and miscellaneous ex- penses, labor, and other general expenditures in Washington..... 1,500.00

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## Bureau of Biological Survey—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>"General expenses, Bureau of Biological Survey, 1910" (biological investigations), \$18,000—Continued.</i>	<i>"General expenses, Bureau of Biological Survey, 1911" (biological investigations), \$18,000—Con.</i>	<i>"General expenses, Bureau of Biological Survey, 1912" (biological investigations), \$25,000—Con.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(36) Biological survey of Utah..... \$544.29 A survey of the natural life areas of the State for the purpose of preparing reports and maps showing the life and crop zones as a guide to the farmers in selecting crops. Objects same as in Projects 1 and 2.		
(37) Biological reconnaissance of parts of Virginia, Tennessee, Georgia, Alabama, Mississippi, North Carolina, Kentucky, Louisiana, and Florida..... 263.33		
(44) Biological survey of Arizona..... 1,830.00 A survey of the Territory for the purpose of publishing maps and reports on the natural distribution of animal and plant life and natural crop zones and areas. The work will serve as a basis for intelligent crop selection in newly opening sections of the irrigable areas.		
(45) Biological survey of Oregon and Washington.... 1,087.00 Objects same as Projects 2 and 3.		
(54) Miscellaneous investigations..... 1,645.50 Includes minor subjects of economic importance and emergency cases not otherwise provided for.	(54) Miscellaneous investigations..... \$1,000.00	(54) Miscellaneous investigations..... \$1,500.00
<i>"General expenses, Bureau of Biological Survey, 1910" (administrative expenses), \$15,000.</i>	<i>"General expenses, Bureau of Biological Survey, 1911" (administrative expenses), \$12,100.</i>	<i>"General expenses, Bureau of Biological Survey, 1912" (administrative expenses), \$14,200.</i>
Lump-fund salaries in Washington..... \$10,382.07	Lump-fund salaries in Washington..... \$9,500.00	Lump-fund salaries in Washington..... \$7,000.00
Stationery..... 372.48	Stationery..... 200.00	Stationery..... 550.00
Miscellaneous supplies and services, equipment, books, etc..... 1,454.21	Miscellaneous supplies and services, equipment, books, etc..... 540.00	Miscellaneous supplies and services, equipment, books, etc..... 2,500.00
Furniture..... 346.27	Furniture..... 200.00	Furniture..... 600.00
Freight..... 1.00	Freight..... 100.00	Freight..... 200.00
Express..... 242.90	Express..... 300.00	Express..... 500.00
Telegraph..... 16.36	Telegraph..... 25.00	Telegraph..... 100.00
Telephone..... 34.19	Telephone..... 35.00	Telephone..... 50.00
Apparatus, instruments, and laboratory material..... 474.11	Apparatus, instruments, and laboratory material..... 100.00	Apparatus, instruments, and laboratory material..... 700.00
Travel and station and field expenses..... 479.45	Travel and station and field expenses..... 1,100.00	Travel and station and field expenses..... 2,000.00
Total expenditures to August 31, 1910..... 13,833.04		
Outstanding liabilities on August 31, 1910 (estimated).... 1,037.05		
Balance to be turned back in Treasury (estimated)..... 129.91		
Total amount of above appropriation..... 15,000.00	Total amount of above appropriation (a decrease from 1910 of \$2,900).... 12,100.00	Total amount estimated (an increase over 1911 of \$2,100)..... 14,200.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the administrative work of the Bureau of Biological Survey. This work fell naturally under the following project:	NOTE.—There is a decrease in the above appropriation of \$2,900 as follows: One editorial clerk, at \$1,200, and one photographer, at \$1,200, have been transferred to the statutory roll, and \$500 is transferred to the contingent fund for mechanical shopwork. NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the administrative work of the Bureau of Biological Survey. This work falls naturally under the following project:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the administrative work of the Bureau of Biological Survey. This work will fall naturally under the following project:
PROJECT.	PROJECT.	PROJECT.
(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 14,870.09	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 12,100.00	(28) Expenses for administration, including contingent and miscellaneous expenses, labor, and other general expenditures in Washington..... 14,200.00
Total of all appropriations for Bureau of Biological Survey..... 87,420.00	Total of all appropriations for Bureau of Biological Survey (a decrease from 1910 of \$500)..... 86,920.00	Total amount estimated for Bureau of Biological Survey (an increase over 1911 of \$39,180)..... 126,100.00
Total expenditures to August 31, 1910..... \$1,205.32		
Outstanding liabilities on August 31, 1910 (estimated).... 2,350.14		
Balance to be turned back in Treasury (estimated)..... 3,864.54		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## DIVISION OF ACCOUNTS AND DISBURSEMENTS.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Division of Accounts and Disbursements, 1910, \$61,490.</i>			<i>Salaries, Division of Accounts and Disbursements, 1911, \$79,990.</i>		<i>Salaries, Division of Accounts and Disbursements, 1912, \$98,470.</i>	
Zappone, A.....	Chief of division and disbursing clerk, at \$3,250.....	\$3,250.00	1 chief of division and disbursing clerk, who shall be administrative officer of the fiscal affairs of the department.....	\$3,250.00	1 chief of division and disbursing clerk, who shall be administrative officer of the fiscal affairs of the department (increase of \$750 submitted).....	\$4,000.00
Calvert, E. B.....	Assistant chief, at \$2,500.....	2,500.00	1 assistant chief of division.....	2,500.00	1 assistant chief of division (increase of \$250 submitted).....	2,750.00
Nevius, W. J.....	Auditor, at \$2,000.....	833.34	1 chief of office of accounts and fiscal agent, who may be detailed to the Forest Service for duty in or out of the city of Washington.....	2,500.00	1 chief of office of accounts and fiscal agent, who may be detailed to the Forest Service for duty in or out of the city of Washington.....	2,500.00
Smith, A. W.....	Auditor, at \$2,000.....	1,166.66	8 district fiscal agents, at \$2,000 each, who may be detailed to the Forest Service for duty in or out of the city of Washington.....	16,000.00	7 district fiscal agents, at \$2,000 each, who may be detailed to the Forest Service for duty in or out of the city of Washington (decrease of 1 submitted).....	14,000.00
Yerby, E. D.....	Cashier and chief clerk, at \$2,000.....	1,166.66	2 auditors, at \$2,000 each.....	4,000.00	1 supervising auditor (in lieu of 1 auditor at \$2,000, an increase of \$250 submitted).....	2,250.00
Fagan, M. E.....	Clerk, class 4.....	833.34	1 cashier and chief clerk.....	2,000.00	1 auditor (decrease of 1 as above).....	2,000.00
Smith, A. W.....	Clerk, class 4.....	1,800.00	3 clerks, class 4.....	5,400.00	1 cashier and chief clerk (increase of \$250 submitted).....	2,250.00
Forbes, E. E.....	Clerk, class 4.....	1,050.00	7 clerks, class 3.....	11,200.00	1 deputy disbursing clerk (in lieu of 1 district fiscal agent, at \$2,000).....	2,000.00
Legge, F. W.....	Clerk, class 4.....	750.00	10 clerks, class 2.....	14,000.00	1 supervising bookkeeper (in lieu of 1 clerk, class 4, and increase of \$200 submitted).....	2,000.00
Nevius, W. J.....	Clerk, class 4.....	1,600.00	8 clerks, class 1.....	9,600.00	2 clerks, class 4 (decrease of 1 as above).....	3,600.00
Quinn, P. H.....	Clerk, class 3.....	1,600.00	3 clerks, at \$1,000 each.....	3,000.00	10 clerks, class 3 (increase of 3 submitted).....	16,000.00
Cox, F. C.....	Clerk, class 3.....	1,600.00	1 clerk.....	900.00	16 clerks, class 2 (increase of 6 submitted, 2 by transfer from the statutory roll of the Bureau of Animal Industry, 1 by transfer from the statutory roll of the Bureau of Plant Industry, and 3 new places).....	22,400.00
Jones, W. W.....	Clerk, class 3.....	1,600.00	2 clerks, at \$840 each.....	1,680.00	9 clerks, class 1 (increase of 1 submitted by transfer from the statutory roll of the Bureau of Chemistry).....	10,800.00
Montgomery, Anna.....	Clerk, class 3.....	1,600.00	3 clerks, at \$720 each.....	2,160.00	4 clerks, at \$1,000 each (increase of 1 submitted by transfer from the statutory roll of the Bureau of Plant Industry).....	4,000.00
Quinn, P. H.....	Clerk, class 3.....	933.33	1 custodian of records and files.....	1,200.00	6 clerks, at \$900 each (increase of 5 submitted).....	5,400.00
Taylor, Chas. W.....	Clerk, class 3.....	666.67	1 messenger.....	600.00	NOTE.—Two clerks at \$840 and three clerks, at \$720 each dropped.	
Shuck, W. L.....	Clerk, class 3.....	1,600.00			1 custodian of records and files.....	1,200.00
Swift, J. W.....	Clerk, class 3.....	1,600.00			1 messenger (submitted).....	720.00
Teller, D. A.....	Clerk, class 3.....	1,600.00			1 messenger.....	600.00
Berryhill, M. B.....	Clerk, class 2.....	1,291.10			The deputy disbursing clerk herein provided for shall hereafter have authority to sign checks in the name of the disbursing clerk; he shall give bond to the United States in such sum as the Secretary of the Treasury may require, and when so acting for the disbursing clerk shall be subject to all the liabilities and penalties prescribed by law for the official misconduct in like cases of the disbursing clerk for whom he acts, and the official bond of the disbursing clerk executed shall also be made to cover and apply to the acts of the deputy disbursing clerk.	
Cunningham, S. H.....	Clerk, class 2.....	1,400.00				
Downs, N. L.....	Clerk, class 2.....	583.34				
Taylor, Chas. W.....	Clerk, class 2.....	816.66				
Franks, Wyatt C.....	Clerk, class 2.....	840.00				
Galloway, Ballard E.....	Clerk, class 2.....	346.10				
Gould, E. D.....	Clerk, class 2.....	1,400.00				
Harrington, L. F.....	Clerk, class 2.....	1,400.00				
Hubbard, M. S. B.....	Clerk, class 2.....	1,400.00				
Lourim, J. D.....	Clerk, class 2.....	1,400.00				
McCutchin, M.....	Clerk, class 2.....	1,400.00				
Wagner, F. H.....	Clerk, class 2.....	1,400.00				
Dodson, B. M.....	Clerk, class 1.....	1,200.00				
Downs, N. L.....	Clerk, class 1.....	700.00				
Zapoleon, Louis B.....	Clerk, class 1.....	500.00				
Dykes, J. W.....	Clerk, class 1.....	1,200.00				
Franks, Wyatt C.....	Clerk, class 1.....	473.33				
Roberts, Jasper N.....	Clerk, class 1.....	720.00				
Handy, R. B., jr.....	Clerk, class 1.....	1,200.00				
Haskell, Sadie.....	Clerk, class 1.....	1,200.00				
Martin, F. R.....	Clerk, class 1.....	516.67				
Stewart, Williams.....	Clerk, class 1.....	683.33				
Springer, J. F.....	Clerk, class 1.....	1,200.00				
Bagley, H. S.....	Clerk, at \$1,000.....	600.01				
Roberts, Jasper N.....	Clerk, at \$1,000.....	400.00				
Cooksey, H. B.....	Clerk, at \$1,000.....	1,000.00				
De Loss, M. W.....	Clerk, at \$1,000.....	500.00				
Hicks, Jennie M.....	Clerk, at \$1,000.....	69.44				
Stewart, William.....	Clerk, at \$900.....	425.00				
Bagley, H. S.....	Clerk, at \$900.....	360.00				
Galloway, Ballard E.....	Clerk, at \$840.....	52.50				
Medley, T. C.....	Clerk, at \$840.....	487.50				
De Loss, M. W.....	Clerk, at \$840.....	420.00				
McNaught, A., jr.....	Clerk, at \$720.....	420.00				
Hess, M. H.....	Clerk, at \$720.....	455.00				
Medley, T. C.....	Clerk, at \$720.....	385.00				
Fagan, George M.....	Clerk, at \$720.....	300.00				
McNaught, A., jr.....	Clerk, at \$720.....	310.00				
Ramsay, Robert E.....	Clerk, at \$720.....	12.00				
Hess, M. H.....	Clerk, at \$720.....	330.00				
Walker, Shipley B.....	Clerk, at \$720.....	366.00				
Mahan, Thomas F.....	Clerk, at \$720.....	262.00				
Murphy, R. O. D.....	Custodian of records and files, at \$1,200.....	90.00				
Murray, W. A.....	Messenger, at \$600.....	1,200.00				
Murphy, R. O. D.....		450.00				
Oakley, James F.....		68.33				
Tomlin, Robert M.....		75.00				
Total.....		60,658.31	Total amount of above appropriation (an increase over 1910 of \$18,500) ..	79,990.00	Total amount estimated (an apparent increase over 1911 of \$18,450) ..	98,470.00
Unexpended balance.....		831.69				
Total amount of above appropriation.....		61,490.00				

NOTE.—There is an increase in the above appropriation of \$18,450 for promotions, transfers from other bureaus, and new places. The promotions requested are all well deserved and are asked so as to make the salaries of these employees more nearly agree with the salaries paid to employees in other departments doing work similar in character and importance. The new places are absolutely necessary to prepare the many fiscal re-

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*Division of Accounts and Disbursements—Continued.*

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Division of Accounts and Disbursements, 1910, \$61,490—Continued.	Salaries, Division of Accounts and Disbursements, 1911, \$79,990—Continued.	Salaries, Division of Accounts and Disbursements, 1912, \$98,470—Continued.
		<p>ports required to be made annually to Congress and to keep up the other work of the division which has increased very much on account of the expansion of the department. A deputy disbursing clerk, at \$2,000, has been added in lieu of one district fiscal agent at the same salary. In cases of emergency, and when the disbursing clerk is absent on leave or otherwise, he will sign checks in the disbursing clerk's name and thus prevent any interruption in the public business. Similar legislation was enacted last year for the Treasury Department. Five places, aggregating \$6,400, have been transferred from the statutory rolls of other bureaus, as shown below, and the appropriations of those bureaus reduced accordingly. The changes in detail are as follows:</p> <p>Promotions:</p> <p>1 chief of division . \$750.00</p> <p>1 assistant chief of division . . . . . 250.00</p> <p>1 supervising auditor . . . . . 250.00</p> <p>1 cashier and chief clerk . . . . . 250.00</p> <p>1 supervising bookkeeper . . . . . 200.00</p> <p>New places:</p> <p>1 deputy disbursing clerk . . . . . 2,000.00</p> <p>3 clerks, class 3 . . . . . 4,800.00</p> <p>3 clerks, class 2 . . . . . 4,200.00</p> <p>5 clerks, at \$900 each . . . . . 4,500.00</p> <p>1 messenger . . . . . 720.00</p> <p>Transfers from statutory rolls of other bureaus:</p> <p>3 clerks, class 2 (2 from Bureau of Animal Industry and 1 from Bureau of Plant Industry) . . . . . 4,200.00</p> <p>1 clerk, class 1 (from Bureau of Chemistry) . . . . . 1,200.00</p> <p>1 clerk (from Bureau of Plant Industry) . . . . . 1,000.00</p> <p style="text-align: right;">24,320.00</p> <p>Places dropped:</p> <p>1 district fiscal agent . . . . . 2,000.00</p> <p>2 clerks, at \$840 each . . . . . 1,680.00</p> <p>3 clerks, at \$720 each . . . . . 2,160.00</p> <p style="text-align: right;">5,840.00</p> <p style="text-align: right;">18,480.00</p>
The above force performed the following duties:	The above force is performing the following duties:	The above force will perform the following duties:
Administration:	Administration:	Administration:
1 chief of division and disbursing clerk, who shall be administrative officer of the fiscal affairs of the department . . . . . \$3,250.00	1 chief of division and disbursing clerk, who shall be administrative officer of the fiscal affairs of the department . . . . . \$3,250.00	1 chief of division and disbursing clerk, who shall be administrative officer of the fiscal affairs of the department . . . . . 4,000.00
1 assistant chief of division (in charge of the Weather Bureau branch) . . . . . 2,500.00	1 assistant chief of division (in charge of the Weather Bureau branch) . . . . . 2,500.00	1 assistant chief of division (in charge of the Weather Bureau branch) . . . . . 2,750.00
1 custodian of records and files . . . . . 1,200.00		
1 clerk, class 1 . . . . . 1,200.00		
1 clerk . . . . . 900.00		
1 messenger . . . . . 600.00	1 chief, Office of Accounts, and fiscal agent (in charge of the Forest Service branch) . . . . . 2,500.00	1 chief, Office of Accounts, and fiscal agent (in charge of the Forest Service branch) . . . . . 2,500.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Division of Accounts and Disbursements—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Division of Accounts and Disbursements, 1910, \$61,490—Continued.</i>	<i>Salaries, Division of Accounts and Disbursements, 1911, \$79,990—Continued.</i>	<i>Salaries, Division of Accounts and Disbursements, 1912, \$98,470—Continued.</i>
Administration—Continued.	Administration—Continued.	Administration—Continued.
	8 district fiscal agents, at \$2,000 each (in charge of the fiscal affairs of the Forest Service district offices).....\$16,000.00	7 district fiscal agents, at \$2,000 each (in charge of the fiscal affairs of the Forest Service district offices).....\$14,000.00
	1 custodian of records and files..... 1,200.00	1 deputy disbursing clerk..... 2,000.00
	1 clerk, class 1..... 1,200.00	1 custodian of records and files..... 1,200.00
	1 messenger..... 480.00	1 clerk, class 1..... 1,200.00
		1 messenger..... 600.00
\$9,650.00	\$27,130.00	\$28,250.00
	NOTE.—The increase under this heading is due to the fact that beginning with this fiscal year the fiscal officers of the Forest Service, both in Washington and in the district centers, were transferred to the statutory roll of the Division of Accounts and Disbursements.	
Cashier's section:	Cashier's section:	Cashier's section:
1 cashier and chief clerk (in charge of cashier's section in addition to his administrative duties as chief clerk of the division)..... \$2,000.00	1 cashier and chief clerk (in charge of cashier's section in addition to his administrative duties as chief clerk of the division)..... \$2,000.00	1 cashier and chief clerk (in charge of cashier's section in addition to his administrative duties as chief clerk of the division)..... 2,250.00
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	2 clerks, class 3..... 3,200.00
4 clerks, class 2..... 5,600.00	3 clerks, class 2..... 4,200.00	3 clerks, class 2..... 4,200.00
1 clerk..... 720.00	1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00
	1 clerk..... 720.00	1 clerk..... 900.00
9,920.00	9,720.00	11,750.00
Auditing section A:	Auditing section:	Auditing section:
1 auditor..... 2,000.00	1 auditor..... 2,000.00	1 supervising auditor..... 2,250.00
3 clerks, class 3..... 4,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
2 clerks, class 1..... 2,400.00	4 clerks, class 3..... 6,400.00	5 clerks, class 3..... 8,000.00
9,200.00	5 clerks, class 2..... 7,000.00	5 clerks, class 2..... 7,000.00
Auditing section B:	2 clerks, class 1..... 2,400.00	2 clerks, class 1..... 2,400.00
1 auditor..... 2,000.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
2 clerks, class 3..... 3,200.00	1 clerk..... 720.00	1 clerk..... 900.00
3 clerks, class 2..... 4,200.00		
1 clerk..... 840.00		
10,240.00	21,320.00	23,350.00
NOTE.—During the year the two auditing sections A and B were consolidated into one section.		
Bookkeeper's section:	Bookkeeper's section:	Bookkeeper's section:
1 clerk, class 4..... \$1,800.00	1 clerk, class 4..... 1,800.00	1 supervising bookkeeper..... 2,000.00
1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
1 clerk, class 2..... 1,400.00	2 clerks, class 2..... 2,800.00	3 clerks, class 2..... 4,200.00
1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00	1 clerk, class 1..... 1,200.00
2 clerks, at \$1,000..... 2,000.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
1 clerk..... 840.00	2 clerks, at \$840..... 1,680.00	4 clerks, at \$900..... 3,600.00
2 clerks, at \$720..... 1,440.00	1 clerk..... 720.00	1 messenger..... 720.00
10,280.00	11,700.00	14,320.00
Miscellaneous section:	Miscellaneous section:	Miscellaneous section:
1 clerk, class 4..... 1,800.00	1 auditor..... 2,000.00	1 auditor..... 2,000.00
2 clerks, class 2..... 2,800.00	1 clerk, class 3..... 1,600.00	1 clerk, class 3..... 1,600.00
2 clerks, class 1..... 2,400.00	1 clerk, class 2..... 1,400.00	2 clerks, class 2..... 2,800.00
7,000.00	2 clerks, class 1..... 2,400.00	2 clerks, class 1..... 2,400.00
Freight and transportation section:	Freight and transportation section:	Freight and transportation section:
1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00	1 clerk, class 4..... 1,800.00
2 clerks, class 1..... 2,400.00	3 clerks, class 2..... 4,200.00	1 clerk, class 3..... 1,600.00
1 clerk..... 1,000.00	2 clerks, class 1..... 2,400.00	3 clerks, class 2..... 4,200.00
1 clerk..... 840.00	2 clerks, at \$1,000..... 2,000.00	2 clerks, class 1..... 2,400.00
6,040.00		2 clerks, at \$1,000..... 2,000.00
62,330.00	10,400.00	12,000.00
Detailed from office of Secretary:	Detailed to office of Secretary:	
1 clerk..... 840.00	1 messenger..... 600.00	
61,490.00	88,270.00	98,470.00
	Detailed from office of Secretary:	
	4 clerks, class 2..... \$5,600.00	
	1 clerk, class 1..... 1,200.00	
	1 clerk..... 1,000.00	
	1 messenger..... 480.00	
	8,280.00	
	79,990.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## DIVISION OF PUBLICATIONS.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>Salaries, Division of Publications, 1910, \$173,450.</i>			<i>Salaries, Division of Publications, 1911, \$172,730.</i>		<i>Salaries, Division of Publications, 1912, \$177,510.</i>	
Arnold, Joseph A.....	Editor and chief of division, at \$3,000.	\$3,000.00	1 editor, who shall be chief of division.....	\$3,000.00	1 editor, who shall be chief of division (increase of \$1,000 submitted).....	\$4,000.00
Stallings, B. D.....	Editor and assistant chief, at \$2,250.	2,250.00	1 editor, who shall be assistant chief of division.....	2,250.00	1 editor, who shall be assistant chief of division.....	2,250.00
Mudd, A. I.....	Chief clerk, at \$2,000.....	2,000.00	1 chief clerk.....	2,000.00	1 chief clerk.....	2,000.00
Hill, George Wm.....	Associate editor, at \$2,000.....	1,983.33	1 assistant editor.....	2,000.00	2 assistant editors, at \$2,000 each (increase of 1 submitted).....	4,000.00
Cornman, Ephraim.....	Assistant editor, at \$1,600.....	1,600.00	4 assistant editors, at \$1,600 each..	6,400.00	3 assistant editors, at \$1,800 each (in lieu of 3 assistant editors, at \$1,600 each, an increase of \$200 in each case).....	5,400.00
Harding, W. F.....	Assistant editor, at \$1,600.....	1,600.00	2 assistant editors, at \$1,400 each..	2,800.00	1 assistant editor (decrease of 1 submitted).....	1,400.00
Kennedy, G. W.....	Assistant editor, at \$1,600.....	1,600.00	1 assistant in charge of indexing..	1,800.00	1 assistant in charge of indexing (increase of \$200 submitted)...	2,000.00
Searles, Stanley.....	Assistant editor, at \$1,600.....	200.00	1 indexer.....	1,400.00	1 indexer.....	1,400.00
Thornton, S. Edwin.....	Assistant editor, at \$1,400.....	1,400.00	1 assistant in charge of illustrations	2,000.00	1 assistant in charge of illustrations	2,000.00
Carter, Delos M.....	Assistant editor, at \$1,400.....	1,400.00	1 draftsman or photographer.....	1,500.00	1 draftsman or photographer (increase of \$100 submitted).....	1,600.00
Searles, Stanley.....	Assistant editor, at \$1,400.....	1,224.99	2 draftsmen or photographers, at \$1,400 each.....	2,800.00	2 draftsmen or photographers, at \$1,500 each (increase of \$100 each submitted).....	3,000.00
Greathouse, C. H.....	Assistant, charge indexing, at \$1,800.	1,800.00	6 draftsmen or photographers, at \$1,200 each.....	7,200.00	6 draftsmen or photographers, at \$1,200 each.....	7,200.00
Hoskins, Ed S.....	Indexer, at \$1,400.....	1,396.11	1 assistant photographer.....	840.00	1 assistant photographer (increase of \$60 submitted).....	900.00
Williams, L. S.....	Assistant in charge of illustrations, at \$2,000.	2,000.00	1 assistant in charge of document section.....	2,000.00	1 assistant in charge of document section.....	2,000.00
Boettcher, A. B.....	Draftsman or photographer, at \$1,500.	1,054.17	1 foreman, miscellaneous distribution.....	1,500.00	1 foreman, miscellaneous distribution (increase of \$100 submitted).....	1,600.00
Stevenson, J. H.....	Draftsman or photographer, at \$1,400.	441.66	1 foreman, farmers' bulletin distribution.....	1,200.00	2 draftsmen or photographers, at \$1,500 each (increase of \$100 each submitted).....	3,000.00
Cline, W. S.....	Draftsman or photographer, at \$1,400.	1,400.00	1 forewoman.....	1,200.00	6 draftsmen or photographers, at \$1,200 each.....	7,200.00
Freyer, Chas. H.....	Draftsman or photographer, at \$1,400.	412.22	1 clerk, class 2.....	1,400.00	1 assistant photographer (increase of \$60 submitted).....	900.00
Stevenson, J. H.....	Draftsman or photographer, at \$1,200.	987.78	5 clerks, class 1.....	6,000.00	1 assistant in charge of document section.....	2,000.00
Freyer, Chas. H.....	Draftsman or photographer, at \$1,200.	846.66	10 clerks, at \$1,000 each.....	10,000.00	1 assistant in document section.....	1,600.00
Oyster, Franklin E.....	Draftsman or photographer, at \$1,200.	300.00	10 clerks, at \$900 each.....	9,000.00	1 foreman, miscellaneous distribution (increase of \$100 submitted).....	1,600.00
Beeson, Loring W.....	Photographer, at \$1,200.....	1,200.00	25 clerks, at \$840 each.....	21,000.00	1 foreman, farmers' bulletin distribution.....	1,200.00
Brown, F. H.....	Photographer, at \$1,200.....	850.00	32 clerks, at \$720 each.....	23,040.00	1 forewoman.....	1,400.00
Currie, William.....	Photographer, at \$1,200.....	1,103.33	1 chief folder.....	1,000.00	1 forewoman.....	1,400.00
Hallock, L. V.....	Photographer, at \$1,200.....	1,200.00	1 folder.....	900.00	7 clerks, class 1 (increase of 2 submitted).....	8,400.00
Olmsted, Arthur J.....	Photographer, at \$1,200.....	500.00	3 folders, at \$840 each.....	2,520.00	10 clerks, at \$1,000 each.....	10,000.00
Paltridge, Geo. H.....	Assistant photographer, at \$840	588.34	2 skilled laborers, at \$900 each....	1,800.00	10 clerks, at \$900 each.....	9,000.00
Bullock, Julia E.....	Assistant, charge of document section, at \$2,000.	2,000.00	15 skilled laborers, at \$840 each....	12,600.00	40 clerks or skilled laborers, at \$840 each (increase of 15 submitted in lieu of 15 skilled laborers, at \$840 each).....	33,600.00
Handy, R. B.....	Assistant in document section, at \$1,600.	1,600.00	15 skilled laborers, at \$780 each....	11,700.00	15 clerks or skilled laborers, at \$780 each (in lieu of 15 skilled laborers, at \$780 each).....	11,700.00
Cleary, Francis J. P.....	Foreman, miscellaneous distribution, at \$1,500.	1,500.00	19 skilled laborers, at \$720 each....	13,680.00	50 clerks or skilled laborers, at \$720 each (increase of 18 in lieu of 18 skilled laborers, at \$720 each).....	36,000.00
Hendrix, J. H.....	Foreman, farmers' bulletin distribution, at \$1,200.	1,200.00	2 messengers, at \$840 each.....	1,680.00	1 chief folder.....	1,000.00
Walter, H. S.....	Forewoman, at \$1,400.....	1,400.00	4 messengers, at \$720 each.....	2,880.00	1 folder.....	900.00
Thorn, M. E.....	Forewoman, at \$1,200.....	1,200.00	3 messengers, at \$600 each.....	1,800.00	3 folders, at \$840 each.....	2,520.00
Edwards, M. E.....	Clerk, class 2.....	1,400.00	2 messengers or messenger boys, at \$480 each.....	960.00	2 skilled laborers, at \$900 each....	1,800.00
Riley, John O.....	Clerk, class 1.....	1,200.00	2 messengers or messenger boys, at \$420 each.....	840.00	NOTE.—Fifteen skilled laborers, at \$840 each, 15 skilled laborers, at \$780 each, and 18 skilled laborers, at \$720 each, have been combined with clerks of these grades. One skilled laborer, at \$720, has also been transferred to the Secretary's roll as an elevator conductor at the same salary.	
Bracey, C. E.....	Clerk, class 1.....	1,200.00	2 messengers or messenger boys, at \$360 each.....	720.00	2 messengers, at \$840 each.....	1,680.00
Chapman, Harriet B.....	Clerk, class 1.....	1,200.00	2 laborers, at \$660 each.....	1,320.00	4 messengers, at \$720 each.....	2,880.00
Clark, Blanche B.....	Clerk, class 1.....	1,200.00	1 laborer.....	600.00	3 messengers, at \$600 each.....	1,800.00
Murray, Anne R.....	Clerk, class 1.....	750.00	3 charwomen, at \$480 each.....	1,440.00	2 messengers or messenger boys, at \$480 each.....	960.00
Nichols, I. J.....	Clerk, class 1.....	450.00	4 charwomen, at \$240 each.....	960.00	2 messengers or messenger boys, at \$420 each.....	840.00
Stoddard, M. C.....	Clerk, class 1.....	1,200.00	Total amount of above appropriation (a decrease from 1910 of \$720).....		2 messengers or messenger boys, at \$360 each.....	720.00
Goodchild, M. A.....	Clerk, at \$1,000.....	994.44			2 laborers, at \$660 each.....	1,320.00
Hammack, Annie L.....	Clerk, at \$1,000.....	1,000.00			1 laborer.....	600.00
Lawson, Laura B.....	Clerk, at \$1,000.....	1,000.00			4 charwomen, at \$480 each (increase of 1 in lieu of 1 charwoman at \$240, an increase of \$240 submitted).....	1,920.00
Merriam, Lucy R.....	Clerk, at \$1,000.....	1,000.00			3 charwomen, at \$240 each (decrease of 1 as above).....	720.00
Moseley, Maggie M.....	Clerk, at \$1,000.....	1,000.00			Total amount estimated (an apparent increase over 1911 of \$4,780)....	
Murray, Anne R.....	Clerk, at \$1,000.....	375.00				
Nichols, I. J.....	Clerk, at \$1,000.....	625.01				
Myer, Alice.....	Clerk, at \$1,000.....	1,000.00				
Plant, Catherine T.....	Clerk, at \$1,000.....	1,000.00				
Smith, Mary A. E.....	Clerk, at \$1,000.....	1,000.00				
Tull, Ava J.....	Clerk, at \$1,000.....	1,000.00				
Carpenter, Stella L.....	Clerk, at \$900.....	900.00				
Daniels, M. A.....	Clerk, at \$900.....	900.00				
Drayton, Hester E.....	Clerk, at \$900.....	352.50				
Thode, Joachim.....	Clerk, at \$900.....	547.50				
Dunford, Annie.....	Clerk, at \$900.....	900.00				
Haas, C. B.....	Clerk, at \$900.....	900.00				
Hayes, Rose A.....	Clerk, at \$900.....	892.50				
Kammerer, M. M.....	Clerk, at \$900.....	525.00				
Penfield, Cora A.....	Clerk, at \$900.....	375.00				
Nelson, Ella M.....	Clerk, at \$900.....	887.50				
Roe, Ida M. B.....	Clerk, at \$900.....	900.00				
Saunders, Catherine.....	Clerk, at \$900.....	900.00				
Armstrong, Marian.....	Clerk, at \$840.....	840.00				
Bane, Philena M.....	Clerk, at \$840.....	840.00				
Barber, Fannie C.....	Clerk, at \$840.....	795.67				
Coe, Sallie A. B.....	Clerk, at \$840.....	44.33				
Buffington, Bessie C.....	Clerk, at \$840.....	821.33				
Burlingame, Sarah A.....	Clerk, at \$840.....	840.00				
Carraway, Lucie C.....	Clerk, at \$840.....	840.00				
Connor, Julia A.....	Clerk, at \$840.....	840.00				
Espita, Mamie.....	Clerk, at \$840.....	708.18				
Wright, May H.....	Clerk, at \$840.....	65.33				
Galloway, Maud P.....	Clerk, at \$840.....	840.00				
Gardner, Lucy A.....	Clerk, at \$840.....	805.00				
Goldsmith, Bennie H.....	Clerk, at \$840.....	490.00				
Hobgood, Mary L.....	Clerk, at \$840.....	21.00				
Thode, Joachim.....	Clerk, at \$840.....	329.00				
Johnson, Willette M.....	Clerk, at \$840.....	490.00				
Kammerer, M. M.....	Clerk, at \$840.....	350.00				
King, Minnesota J.....	Clerk, at \$840.....	840.00				
McCargar, Gertrude.....	Clerk, at \$840.....	735.00				
Mulholland, M. B.....	Clerk, at \$840.....	93.33				
Moore, Ella D.....	Clerk, at \$840.....	840.00				
Owens, Maude.....	Clerk, at \$840.....	840.00				

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Division of Publications—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
Salaries, Division of Publications, 1910, \$173,450—Continued.	Salaries, Division of Publications, 1911, \$172,730—Continued.	Salaries, Division of Publications, 1912, \$177,510—Continued.
Powell, Emily..... Clerk, at \$840.....	\$840.00	
Price, Almira..... Clerk, at \$840.....	840.00	
Reece, Viola E..... Clerk, at \$840.....	840.00	
Rice, Nellie..... Clerk, at \$840.....	840.00	
Rumbaugh, Bessie G..... Clerk, at \$840.....	840.00	
Sullivan, Helen C..... Clerk, at \$840.....	840.00	
Taylor, A. Robena..... Clerk, at \$840.....	840.00	
Thompson, Augusta H..... Clerk, at \$840.....	840.00	
Wood, Sadie S..... Clerk, at \$840.....	840.00	
Allyn, Amelia M..... Clerk, at \$720.....	720.00	
Barber, Fannie C.....	38.00	
Barr, E. Aileen.....	104.00	
Griffith, Gardner L..... Clerk, at \$720.....	444.00	
Keating, C. G.....	60.00	
Bloom, Rudolph.....	132.00	
Steely, Edna V..... Clerk, at \$720.....	540.00	
Bowman, Grace L..... Clerk, at \$720.....	720.00	
Calnan, Katharine..... Clerk, at \$720.....	720.00	
Coleman, E. Harry..... Clerk, at \$720.....	720.00	
Coskery, Haddie Z.....	562.00	
Esputa, Mamie..... Clerk, at \$720.....	46.00	
Sexton, Martha A.....	64.00	
Dooley, Kate V..... Clerk, at \$720.....	720.00	
Eccleston, Bernice..... Clerk, at \$720.....	416.00	
Johnson, Willette M.....	300.00	
Eubank, Jane E..... Clerk, at \$720.....	690.00	
Hurd, Eva.....	30.00	
Fague, Mary E.....	252.00	
Keating, C. G..... Clerk, at \$720.....	196.00	
Sauls, Robert A.....	130.00	
Fenton, Sallie B.....	22.00	
Hobgood, Mary L..... Clerk, at \$720.....	244.00	
Palmer, Jessamine L.....	420.00	
Gedney, Sarah E..... Clerk, at \$720.....	654.00	
Hartless, Lee.....	60.00	
Gibbs, Geneva..... Clerk, at \$720.....	720.00	
Goldsmith, Bennie H.....	300.00	
Long, Hallock P..... Clerk, at \$720.....	354.00	
Mac Fate, Jos. W.....	66.00	
Hemingway, Mary R..... Clerk, at \$720.....	718.00	
Herrell, S. M. B..... Clerk, at \$720.....	224.00	
Locke, Louisa K.....	445.00	
Hyatt, Helen..... Clerk, at \$720.....	716.00	
Kennon, G. G..... Clerk, at \$720.....	716.00	
McCargar, Gertrude.....	90.00	
Wheelan, F. M..... Clerk, at \$720.....	589.00	
McGrath, Gerald G.....	597.00	
Willson, A. R..... Clerk, at \$720.....	120.00	
Mack, Ella S..... Clerk, at \$720.....	712.00	
Melling, May A..... Clerk, at \$720.....	720.00	
Miller, Susan J..... Clerk, at \$720.....	719.00	
Parker, Grace D..... Clerk, at \$720.....	648.00	
Parkinson, Gertrude..... Clerk, at \$720.....	720.00	
Pickrell, Nina..... Clerk, at \$720.....	718.00	
Rahn, M. B..... Clerk, at \$720.....	714.00	
Rynex, Byrd E..... Clerk, at \$720.....	720.00	
Spalding, Katharine..... Clerk, at \$720.....	720.00	
Sutton, Virginia..... Clerk, at \$720.....	720.00	
Van Kirk, Lucy H..... Clerk, at \$720.....	720.00	
Lawlor, L. D..... Chief folder, at \$1,000.....	1,000.00	
King, Geo. W..... Folder, at \$900.....	900.00	
Gordon, William..... Folder, at \$840.....	840.00	
Parker, Annie..... Folder, at \$840.....	835.33	
Quinn, Maggie..... Folder, at \$840.....	840.00	
Sherwood, Benj. R..... Skilled laborer, at \$900.....	900.00	
Smith, Ida G..... Skilled laborer, at \$900.....	900.00	
Barbour, William H..... Skilled laborer, at \$840.....	840.00	
Bayne, Patterson..... Skilled laborer, at \$840.....	840.00	
Boernstein, Sig. G..... Skilled laborer, at \$840.....	280.00	
Jones, Vester S.....	560.00	
Fowler, Lorena C..... Skilled laborer, at \$840.....	840.00	
Griffin, Milton R..... Skilled laborer, at \$840.....	840.00	
Martin, Benjamin..... Skilled laborer, at \$840.....	840.00	
Peck, Gerald E..... Skilled laborer, at \$840.....	840.00	
Pfunder, William..... Skilled laborer, at \$840.....	840.00	
Phillips, C. E..... Skilled laborer, at \$840.....	840.00	
Poff, Matt..... Skilled laborer, at \$840.....	807.33	
Towers, C. W..... Skilled laborer, at \$840.....	840.00	
Vrooman, Minnie S..... Skilled laborer, at \$840.....	840.00	
Wanstall, Harriet A..... Skilled laborer, at \$840.....	835.33	
Williams, H. H..... Skilled laborer, at \$840.....	840.00	
Young, Wm. H..... Skilled laborer, at \$840.....	840.00	
Angelo, Frank M..... Skilled laborer, at \$780.....	520.00	
Jones, Vester S.....	260.00	
Apperson, M. L..... Skilled laborer, at \$780.....	771.35	
Arnold, Mary D..... Skilled laborer, at \$780.....	780.00	
Barber, George T..... Skilled laborer, at \$780.....	775.68	
Emery, Mary E..... Skilled laborer, at \$780.....	780.00	
Gill, Aurelia B..... Skilled laborer, at \$780.....	780.00	
Hoey, Jennie G..... Skilled laborer, at \$780.....	780.00	
Lieutaud, Louise G..... Skilled laborer, at \$780.....	756.17	
Martin, Elmer L..... Skilled laborer, at \$780.....	780.00	
Mulverhill, Elizabeth..... Skilled laborer, at \$780.....	780.00	
Reuter, Joseph N..... Skilled laborer, at \$780.....	780.00	
Roby, Hattie..... Skilled laborer, at \$780.....	760.50	
Snyder, Frank..... Skilled laborer, at \$780.....	754.00	
		served and are asked so as to make the salaries of these employees more nearly agree with the salaries paid to employees in other departments doing work similar in character and importance. The new places requested are necessary to keep up the work of the division. The changes in detail are as follows:
		Promotions:
		1 chief of division..... \$1,000.00
		3 assistant editors, at \$200 each..... 600.00
		1 assistant, in charge of indexing..... 200.00
		1 draftsman or photographer..... 100.00
		2 draftsmen or photographers, at \$100 each..... 200.00
		1 assistant photographer..... 60.00
		1 foreman, miscellaneous distribution..... 100.00
		1 charwoman..... 240.00
		New places:
		1 assistant editor..... 2,000.00
		2 clerks, class 1..... 2,400.00
		6,900.00
		Places dropped:
		1 assistant editor..... 1,400.00
		Transferred to Secretary's roll:
		1 skilled laborer (elevator conductor)..... 720.00
		4,780.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Division of Publications—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Division of Publications, 1910, \$173,450—Continued.</i>	<i>Salaries, Division of Publications, 1911, \$172,730—Continued.</i>	<i>Salaries, Division of Publications, 1912, \$177,510—Continued.</i>
Turner, Amelia..... Skilled laborer, at \$780..... \$780.00		
Williams, Francis S..... Skilled laborer, at \$780..... 780.00		
Angelo, Frank M..... } 180.00		
Robinson, Clarence A..... } Skilled laborer, at \$720..... 382.00		
O'Neill, John J..... } 60.00		
Augur, Laura..... Skilled laborer, at \$720..... 720.00		
Bailey, Charles G. G..... Skilled laborer, at \$720..... 720.00		
Basehoar, Luther H..... Skilled laborer, at \$720..... 720.00		
Danforth, Laura V..... Skilled laborer, at \$720..... 720.00		
Fisher, Nellie R. G..... Skilled laborer, at \$720..... 690.00		
Ford, Frank M..... } 20.00		
Mitchell, J. Howard..... } Skilled laborer, at \$720..... 684.00		
Freeman, Eli C..... } 180.00		
Morrison, Rufus W..... } Skilled laborer, at \$720..... 520.00		
Hausler, Charles J..... } 368.00		
Locke, Louisa K..... } Skilled laborer, at \$720..... 268.00		
Kelley, M. C..... } 390.00		
MacFate, Jos. W..... } Skilled laborer, at \$720..... 300.00		
Laird, Emily A..... } 720.00		
Lee, Augustus..... } Skilled laborer, at \$720..... 720.00		
Lewis, Ida J..... } Skilled laborer, at \$720..... 720.00		
McNamara, Mary..... } Skilled laborer, at \$720..... 720.00		
McNerhany, Ida..... } Skilled laborer, at \$720..... 720.00		
Posey, Kate..... } Skilled laborer, at \$720..... 720.00		
Trudeau, E. L..... } Skilled laborer, at \$720..... 720.00		
Walker, Knowles H..... } Skilled laborer, at \$720..... 720.00		
Wilson, John J..... } Skilled laborer, at \$720..... 720.00		
Deakins, W. F..... } Messenger, at \$840..... 840.00		
Munro, James..... } Messenger, at \$840..... 840.00		
Carter, Joseph C..... } Messenger, at \$720..... 663.00		
Haardt, H. F..... } 600.00		
McGrath, Gerald G..... } Messenger, at \$720..... 120.00		
Mee, Homer..... } Messenger, at \$720..... 720.00		
Moore, Laurence W..... } Messenger, at \$720..... 674.00		
Bailey, Wm. H..... } Messenger, at \$600..... 206.67		
Cullinan, Thos. L..... } 393.33		
Gordon, Charles N..... } 250.00		
Higgins, Hugh..... } Messenger, at \$600..... 200.00		
Rousseau, George W..... } 143.33		
Long, Michael..... } Messenger, at \$600..... 66.67		
Tomlin, Robert M..... } 525.00		
Bailey, Wm. H..... } Messenger, at \$480..... 314.67		
Rousseau, George W..... } 165.33		
Cullinan, Thos. L..... } Messenger, at \$480..... 165.33		
Higgins, Hugh..... } 314.67		
Berry, Roy E..... } Messenger, at \$420..... 140.00		
Gordon, Chas. N..... } 245.00		
Louthan, John W..... } 44.33		
McGill, George S..... } Messenger, at \$420..... 245.00		
Primm, Herbert W..... } 105.00		
Wood, Francis D..... } 19.83		
Altman, Irvin B..... } 57.00		
Bladen, Wilbur H..... } Messenger, at \$360..... 142.00		
McGill, George S..... } 150.00		
Callahan, Morgan B..... } 7.00		
Hundley, James C..... } Messenger, at \$360..... 75.00		
Kahlert, Ernest L..... } 246.00		
Meyers, Charles F..... } 18.00		
Angelo, Frank M..... } Fireman, at \$720..... 60.00		
O'Neill, John J..... } 660.00		
Schaney, Edward..... } Laborer, at \$660..... 660.00		
Sinclair, H. T..... } Laborer, at \$660..... 660.00		
Contee, Clarence..... } Laborer, at \$600..... 575.00		
Webster, Percival W..... } 21.67		
Dyer, Hattie O..... } Charwoman, at \$480..... 480.00		
Meredith, Elizabeth..... } Charwoman, at \$480..... 480.00		
Ross, Lillian..... } Charwoman, at \$480..... 480.00		
Bruce, Fannie E..... } Charwoman, at \$240..... 64.66		
Hawkins, Helen..... } 172.00		
Dickson, Cornelia..... } Charwoman, at \$240..... 240.00		
Marshall, Rebecca..... } Charwoman, at \$240..... 240.00		
Smith, Sadie R..... } Charwoman, at \$240..... 240.00		
Total..... 171,338.39		
Unexpended balance..... 2,111.61		
<b>Total amount of above appropriation..... 173,450.00</b>	<b>Total amount of above appropriation (a decrease from 1910 of \$720)..... \$172,730.00</b>	<b>Total amount estimated (an apparent increase over 1911 of \$4,780).... \$177,510.00</b>
The above force performed the following duties:	The above force is performing the following duties:	The above force will perform the following duties:
Administration:	Administration:	Administration:
1 editor, who shall be chief of division..... 3,000.00	1 editor, who shall be chief of division..... 3,000.00	1 editor, who shall be chief of division..... 4,000.00
1 chief clerk..... 2,000.00	1 chief clerk..... 2,000.00	1 chief clerk..... 2,000.00
2 clerks, class 1..... 2,400.00	2 clerks, class 1..... 2,400.00	3 clerks, class 1..... 3,600.00
1 clerk..... 900.00	1 clerk..... 900.00	1 clerk..... 900.00
1 skilled laborer..... 720.00	1 laborer..... 660.00	1 laborer..... 660.00
1 messenger..... 720.00	1 messenger..... 840.00	1 messenger..... 840.00
1 messenger..... 360.00	2 messengers, at \$420 each..... 840.00	2 messengers or messenger boys, at \$420 each..... 840.00
1 laborer..... 660.00	1 charwoman..... 480.00	1 charwoman..... 480.00
1 charwoman..... 480.00		
11,240.00	11,120.00	13,320.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Division of Publications—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Division of Publications, 1910, \$173,450—Continued.</i>	<i>Salaries, Division of Publications, 1911, \$172,730—Continued.</i>	<i>Salaries, Division of Publications, 1912, \$177,510—Continued.</i>
Correspondence and files:	Correspondence and files:	Correspondence and files:
1 clerk, class 1..... \$1,200.00	1 clerk, class 1..... \$1,200.00	1 clerk, class 1..... \$1,200.00
1 clerk..... 1,000.00	1 clerk..... 1,000.00	1 clerk..... 1,000.00
4 clerks, at \$900 each..... 3,600.00	1 clerk..... 900.00	1 clerk..... 900.00
5 clerks, at \$840 each..... 4,200.00	6 clerks, at \$840 each..... 5,040.00	6 clerks, at \$840 each..... 5,040.00
7 clerks, at \$720 each..... 5,040.00	3 clerks, at \$720 each..... 2,160.00	3 clerks, at \$720 each..... 2,160.00
1 skilled laborer..... 840.00	2 skilled laborers, at \$840 each..... 1,680.00	2 skilled laborers, at \$840 each..... 1,680.00
1 messenger..... 600.00		
16,480.00	11,980.00	11,980.00
Editing and abstracting:	Editing and abstracting:	Editing and abstracting:
1 editor, who shall be assistant chief of division..... 2,250.00	1 editor, who shall be assistant chief of division..... 2,250.00	1 editor, who shall be assistant chief of division..... 2,250.00
1 associate editor..... 2,000.00	1 assistant editor..... 2,000.00	2 assistant editors, at \$2,000 each..... 4,000.00
4 assistant editors, at \$1,600 each..... 6,400.00	4 assistant editors, at \$1,600 each..... 6,400.00	3 assistant editors, at \$1,800 each..... 5,400.00
2 assistant editors, at \$1,400 each..... 2,800.00	2 assistant editors, at \$1,400 each..... 2,800.00	1 assistant editor..... 1,600.00
1 clerk..... 900.00	1 clerk..... 1,000.00	1 assistant editor..... 1,400.00
1 messenger..... 600.00	1 clerk..... 900.00	1 clerk..... 1,000.00
1 messenger..... 360.00	1 messenger..... 360.00	1 clerk..... 900.00
15,310.00	15,710.00	16,910.00
Illustrating:	Illustrating:	Illustrating:
1 assistant in charge of illustrations..... 2,000.00	1 assistant in charge of illustrations..... 2,000.00	1 assistant in charge of illustrations..... 2,000.00
1 draftsman..... 1,500.00	1 draftsman..... 1,500.00	1 draftsman or photographer..... 1,600.00
1 draftsman..... 1,400.00	1 draftsman..... 1,400.00	2 draftsmen or photographers, at \$1,500 each..... 3,000.00
1 draftsman..... 1,200.00	1 draftsman..... 1,200.00	6 draftsmen or photographers, at \$1,200 each..... 7,200.00
1 photographer..... 1,400.00	1 photographer..... 1,400.00	1 assistant photographer..... 900.00
5 photographers, at \$1,200 each..... 6,000.00	5 photographers, at \$1,200 each..... 6,000.00	1 clerk..... 1,000.00
1 assistant photographer..... 840.00	1 assistant photographer..... 840.00	1 skilled laborer..... 780.00
1 clerk..... 1,000.00	1 clerk..... 1,000.00	1 skilled laborer..... 720.00
1 clerk..... 840.00	1 skilled laborer..... 780.00	1 skilled laborer..... 720.00
1 skilled laborer..... 780.00	1 skilled laborer..... 720.00	1 messenger..... 480.00
1 skilled laborer..... 720.00	1 messenger..... 480.00	1 charwoman..... 480.00
1 messenger..... 480.00	1 charwoman..... 240.00	2 charwomen, at \$480 each..... 960.00
1 charwoman..... 480.00		
1 charwoman..... 240.00	18,880.00	18,640.00
18,880.00	18,040.00	18,640.00
Indexing:	Indexing:	Indexing:
1 assistant in charge of indexing..... 1,800.00	1 assistant in charge of indexing..... 1,800.00	1 assistant in charge of indexing..... 2,000.00
1 indexer..... 1,400.00	1 indexer..... 1,400.00	1 indexer..... 1,400.00
2 clerks, at \$1,000 each..... 2,000.00	3 clerks, at \$1,000 each..... 3,000.00	3 clerks, at \$1,000 each..... 3,000.00
2 clerks, at \$840 each..... 1,680.00	1 clerk..... 840.00	1 clerk..... 840.00
2 clerks, at \$720 each..... 1,440.00	2 clerks, at \$720 each..... 1,440.00	2 clerks, at \$720 each..... 1,440.00
1 messenger..... 600.00	1 messenger..... 600.00	1 messenger..... 600.00
8,920.00	9,080.00	9,280.00
Distributing documents:	Distributing documents:	Distributing documents:
1 assistant in charge of document section..... 2,000.00	1 assistant in charge of document section..... 2,000.00	1 assistant in charge of document section..... 2,000.00
1 assistant in document section..... 1,600.00	1 assistant in document section..... 1,600.00	1 assistant in document section..... 1,600.00
1 foreman miscellaneous distribution..... 1,500.00	1 foreman miscellaneous distribution..... 1,500.00	1 foreman miscellaneous distribution..... 1,600.00
1 foreman farmers' bulletin distribution..... 1,200.00	1 foreman farmers' bulletin distribution..... 1,200.00	1 foreman farmers' bulletin distribution..... 1,200.00
1 forewoman..... 1,400.00	1 forewoman..... 1,400.00	1 forewoman..... 1,400.00
1 forewoman..... 1,200.00	1 forewoman..... 1,200.00	1 forewoman..... 1,200.00
1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00
2 clerks, class 1..... 2,400.00	2 clerks, class 1..... 2,400.00	3 clerks, class 1..... 3,600.00
6 clerks, at \$1,000 each..... 6,000.00	4 clerks, at \$1,000 each..... 4,000.00	4 clerks, at \$1,000 each..... 4,000.00
4 clerks, at \$900 each..... 3,600.00	7 clerks, at \$900 each..... 6,300.00	7 clerks, at \$900 each..... 6,300.00
17 clerks, at \$840 each..... 14,280.00	18 clerks, at \$840 each..... 15,120.00	31 clerks, or skilled laborers, at \$840 each..... 26,040.00
23 clerks, at \$720 each..... 16,560.00	27 clerks, at \$720 each..... 19,440.00	14 clerks, or skilled laborers, at \$780 each..... 10,920.00
1 chief folder..... 1,000.00	1 chief folder..... 1,000.00	44 clerks, or skilled laborers, at \$720 each..... 31,680.00
1 folder..... 900.00	1 folder..... 900.00	1 chief folder..... 1,000.00
3 folders, at \$840 each..... 2,520.00	3 folders, at \$840 each..... 2,520.00	1 folder..... 900.00
2 skilled laborers, at \$900 each..... 1,800.00	2 skilled laborers, at \$900 each..... 1,800.00	3 folders, at \$840 each..... 2,520.00
14 skilled laborers, at \$840 each..... 11,760.00	13 skilled laborers, at \$840 each..... 10,920.00	2 skilled laborers, at \$900 each..... 1,800.00
14 skilled laborers, at \$780 each..... 10,920.00	18 skilled laborers, at \$720 each..... 12,960.00	1 messenger..... 840.00
17 skilled laborers, at \$720 each..... 12,240.00	1 messenger..... 840.00	4 messengers, at \$720 each..... 2,880.00
2 messengers, at \$840 each..... 1,680.00	4 messengers, at \$720 each..... 2,880.00	2 messengers, at \$600 each..... 1,200.00
3 messengers, at \$720 each..... 2,160.00	2 messengers, at \$600 each..... 1,200.00	1 messenger, or messenger boy..... 480.00
1 messenger..... 480.00	1 messenger..... 480.00	1 messenger, or messenger boy..... 360.00
2 messengers, at \$420 each..... 840.00	1 laborer..... 660.00	1 laborer..... 660.00
1 fireman..... 720.00	1 laborer..... 600.00	1 laborer..... 600.00
1 laborer..... 660.00	1 laborer..... 600.00	1 charwoman..... 480.00
1 laborer..... 600.00	1 charwoman..... 480.00	1 charwoman..... 480.00
1 charwoman..... 480.00	3 charwomen, at \$240 each..... 720.00	3 charwomen, at \$240 each..... 720.00
3 charwomen, at \$240 each..... 720.00	102,620.00	107,380.00
102,620.00	106,800.00	107,380.00
Total..... 173,450.00	Total..... 172,730.00	Total..... 177,510.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Division of Publications—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Division of Publications, 1910, \$33,000.</i>	<i>General expenses, Division of Publications, 1911, \$30,000.</i>	<i>General expenses, Division of Publications, 1912, \$30,000.</i>
Rent in Washington..... \$5,000.00	Rent in Washington..... \$5,000.00	Rent in Washington..... \$5,000.00
Labor-saving machinery and supplies..... 4,971.10	Labor-saving machinery and supplies..... 3,000.00	Labor-saving machinery and supplies..... 3,000.00
Envelopes, stationery, and materials..... 12,511.48	Envelopes, stationery, and materials..... 11,500.00	Envelopes, stationery, and materials..... 11,500.00
Office furniture and fixtures..... 977.54	Office furniture and fixtures..... 1,000.00	Office furniture and fixtures..... 1,000.00
Photographic equipment, photographic materials, artists' tools and supplies..... 4,929.97	Photographic equipment, photographic materials, artists' tools, and supplies..... 4,000.00	Photographic equipment, photographic materials, artists' tools, and supplies..... 5,000.00
Gas, electric current, telephone, freight, express, repairs.. 1,216.62	Gas, electric current, telephone, freight, express repairs..... 1,500.00	Gas, electric current, telephone, freight, express, repairs..... 500.00
Wagons, bicycles, horses, harness, and maintenance..... 998.53	Wagons, bicycles, horses, harness, and maintenance..... 1,000.00	Wagons, bicycles, horses, harness, and maintenance..... 1,000.00
Purchase of manuscripts, traveling expenses, electrotypes, illustrations, etc..... 1,528.08	Purchase of manuscripts, traveling expenses, electrotypes, illustrations, etc..... 3,000.00	Purchase of manuscripts, traveling expenses, electrotypes, illustrations, etc..... 3,000.00
Total expenditures to Aug. 31, 1910..... 32,133.32	Total amount of above appropriation (a decrease from 1910 of \$3,000).... 30,000.00	Total amount estimated (no increase)..... 30,000.00
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 119.82		
Balance to be turned back in Treasury (estimated)..... 746.86		
Total amount of above appropriation..... 33,000.00		
NOTE.—The function of the Division of Publications is to supervise the publication work of the department. This work does not vary in character from year to year, but the amount increases with the growth of the department. Such appropriations as may be necessary should be made for the division in order that it may be equipped to perform promptly and efficiently the duties devolving upon it.		
The division is charged with the preparation and editing of all manuscripts submitted for publication by the department, including the Yearbook, annual reports, bulletins, etc.; preparation, printing, and distribution of farmers' bulletins; supervision of the printing and binding; preparation of drawings, wood engravings, photographic work of all kinds; necessary indexing; distribution of department publications; and the preparation and distribution of official information and advance notices of publications and features of the work of the department that may be of interest to agricultural writers and papers.		
The appropriation for the fiscal year 1910 was expended for salaries, rent, necessary furniture, and for supplies in connection with the editorial work, indexing, photographic and drafting work, and the distribution of documents.		
Total of all appropriation for Division of Publications..... 206,450.00	Total of all appropriations for Division of Publications (a decrease from 1910 of \$3,720).... 202,730.00	Total amount estimated for Division of Publications (an increase over 1911 of \$4,780)..... 207,510.00
Total expenditures to Aug. 31, 1910..... 203,471.71		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 119.82		
Balance to be turned back in Treasury (estimated)..... 2,858.47		
Total..... 206,450.00		
NOTE.—In addition to the above, the Division of Publications has immediate supervision of the fund appropriated in the sundry civil appropriation act for the printing and binding for the department, which for the fiscal year 1910 was \$460,000, so that the total of all funds appropriated for the printing and binding expended under the supervision of the Division of Publications was \$666,450.		
NOTE.—The above amount is exclusive of \$460,000 appropriated for the printing and binding for the Department of Agriculture, and is being expended under the immediate supervision of the Editor and Chief of the Division of Publications.		
NOTE.—Exclusive of \$460,000 estimated for printing and binding for the department, to be included in the sundry civil appropriation act, expended under the immediate supervision of the Editor and Chief of the Division of Publications.		

## BUREAU OF STATISTICS.

<i>Salaries, Bureau of Statistics, 1910, \$103,860.</i>	<i>Salaries, Bureau of Statistics, 1911, \$104,700.</i>	<i>Salaries, Bureau of Statistics, 1912, \$109,670.</i>
Olmsted, Victor H..... Statistician and chief of bureau, at \$3,500..... \$3,500.00	1 statistician, who shall be chief of bureau..... \$3,500.00	1 statistician, who shall be chief of bureau (increase of \$1,000 submitted)..... \$4,500.00
Murray, Nat C..... Assistant statistician, at \$2,500..... 2,500.00	1 assistant statistician, who shall be assistant chief of bureau..... 2,500.00	1 assistant statistician, who shall be assistant chief of bureau (increase of \$250 submitted).... 2,750.00
Jones, S. A..... Chief clerk, at \$1,800..... 1,800.00	1 chief clerk..... 1,800.00	1 chief clerk (increase of \$200 submitted)..... 2,000.00
Andrews, Frank..... Clerk, class 4..... 1,285.00	6 clerks, class 4..... 10,800.00	6 clerks, class 4..... 10,800.00
McKenna, R. T..... Clerk, class 4..... 1,800.00	9 clerks, class 3..... 14,400.00	9 clerks, class 3..... 14,400.00
Covert, J. R..... Clerk, class 4..... 1,800.00	12 clerks, class 2..... 16,800.00	12 clerks, class 2..... 16,800.00
Ferguson, Geo. R..... Clerk, class 4..... 1,800.00	2 clerks, at \$1,300 each..... 2,600.00	2 clerks, at \$1,300 each..... 2,600.00
Graham, H. C..... Clerk, class 4..... 1,800.00	16 clerks, class 1..... 19,200.00	17 clerks, class 1 (increase of one submitted)..... 20,400.00
Smith, R. E..... Clerk, class 4..... 1,800.00	10 clerks, at \$1,000 each..... 10,000.00	11 clerks, at \$1,000 each (increase of one submitted)..... 11,000.00
Thompson, E. S..... Clerk, class 4..... 1,800.00	6 clerks, at \$900 each..... 5,400.00	10 clerks, at \$900 each (increase of four submitted)..... 9,000.00
Blodgett, James H..... Clerk, class 3..... 1,600.00	6 clerks, at \$840 each..... 5,040.00	11 clerks, at \$840 each (increase of five submitted)..... 9,240.00
Fansler, O. N..... Clerk, class 3..... 311.11	10 clerks, at \$720 each..... 7,200.00	NOTE.—Ten clerks, at \$720 dropped.
Smedes, H. R..... Clerk, class 3..... 1,284.44	2 messengers, at \$840 each..... 1,680.00	2 messengers, at \$840 each..... 1,680.00
Hammargren, E. L..... Clerk, class 3..... 1,600.00	1 messenger..... 660.00	2 messengers or laborers, at \$720 each (increase of one by transfer from lump fund for general expenses, Administrative Expenses)..... 1,440.00
Houser, A. M..... Clerk, class 3..... 1,200.00	1 messenger or messenger boy..... 480.00	
Leith, C. A..... Clerk, class 3..... 1,600.00	1 laborer..... 720.00	
McKenna, R. T..... Clerk, class 3..... 1,142.22	1 laborer..... 660.00	
Pepper, J. G..... Clerk, class 3..... 457.78	1 charwoman..... 540.00	
Schaake, J. J..... Clerk, class 3..... 200.01	2 charwomen, at \$360 each..... 720.00	
Stone, Israel W..... Clerk, class 3..... 1,400.00	Total amount of above appropriation (an increase over 1910 of \$840)..... 104,700.00	
Smith, Middleton..... Clerk, class 3..... 1,600.00		
Stier, D. W..... Clerk, class 3..... 1,600.00		
Blanford, Lillian B..... Clerk, class 2..... 1,400.00		
Cooney, F. C..... Clerk, class 2..... 1,372.77		
Fansler, O. N..... Clerk, class 2..... 400.56		
Pepper, J. G..... Clerk, class 2..... 935.55		
Fletcher, C. P..... Clerk, class 2..... 1,400.00		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Statistics, 1910, \$103,860—Continued.</i>	<i>Salaries, Bureau of Statistics, 1911, \$104,700—Continued.</i>	<i>Salaries, Bureau of Statistics, 1912, \$109,670—Continued.</i>
Latham, E. G. Clerk, class 2.....	\$1,400.00	
O'Donoghue, C. Clerk, class 2.....	1,353.33	
Painter, J. I. Clerk, class 2.....	1,400.00	
Peabody, John. Clerk, class 2.....	175.00	
Schaake, J. J. Clerk, class 2.....	1,224.99	
Quinn, Eva H. Clerk, class 2.....	1,400.00	
Safford, M. F. Clerk, class 2.....	1,400.00	
Schmidt, Flora. Clerk, class 2.....	1,400.00	
Shanahan, M. E. Clerk, class 2.....	1,400.00	
Lee, W. D. Clerk, at \$1,300.....	1,253.05	
Wright, A. M. Clerk, at \$1,300.....	1,253.06	
Adams, S. G. Clerk, class 1.....	1,200.00	
Barnes, Almont. Clerk, class 1.....	1,133.34	
Blanford, E. M. Clerk, class 1.....	150.00	
Peabody, John. Clerk, class 1.....	1,050.00	
Bowie, M. S. Clerk, class 1.....	1,200.00	
Clark, E. L. Clerk, class 1.....	420.00	
Fisher, Gertrude. Clerk, class 1.....	620.00	
Lundy, Bruner E. Clerk, class 1.....	100.00	
Elliott, Perry. Clerk, class 1.....	1,200.00	
Fansler, O. N. Clerk, class 1.....	623.34	
Merritt, Eugene. Clerk, class 1.....	326.67	
Finckel, C. B. Clerk, class 1.....	1,200.00	
Lancaster, C. M. Clerk, class 1.....	1,193.34	
Love, A. H. Clerk, class 1.....	1,163.34	
Petree, M. R. Clerk, class 1.....	1,200.00	
Peters, E. T. Clerk, class 1.....	1,183.33	
Phillips, Nettie. Clerk, class 1.....	1,173.33	
Skinner, Sara. Clerk, class 1.....	1,200.00	
Walden, Celena. Clerk, class 1.....	1,200.00	
Woodward, E. G. Clerk, class 1.....	1,200.00	
Andersen, Charles. Clerk, at \$1,000.....	1,000.00	
Blanford, E. M. Clerk, at \$1,000.....	875.00	
Collins, Flora P. Clerk, at \$1,000.....	125.01	
Bostwick, H. M. Clerk, at \$1,000.....	1,000.00	
Connor, Rose L. Clerk, at \$1,000.....	986.12	
Fisher, Gertrude. Clerk, at \$1,000.....	358.33	
Sartor, L. E. Clerk, at \$1,000.....	641.67	
Gray, Helen E. Clerk, at \$1,000.....	305.56	
Tracy, Sarah V. Clerk, at \$1,000.....	613.90	
Ingram, M. M. Clerk, at \$1,000.....	997.22	
King, Wm. M. Clerk, at \$1,000.....	998.61	
Michaels, Manly M. Clerk, at \$1,000.....	1,000.00	
Wharton, V. K. Clerk, at \$1,000.....	1,000.00	
Ballard, N. P. Clerk, at \$900.....	860.00	
Cannon, S. P. Clerk, at \$900.....	375.00	
Collins, Flora P. Clerk, at \$900.....	412.50	
Raymond, M. J. Clerk, at \$900.....	112.50	
Cavanagh, J. L. Clerk, at \$900.....	900.00	
Claycomb, C. C. Clerk, at \$900.....	900.00	
Lederer, Birdie B. Clerk, at \$900.....	577.50	
Sartor, L. E. Clerk, at \$900.....	322.50	
Wood, M. L. Clerk, at \$900.....	900.00	
Bell, Florence. Clerk, at \$840.....	175.00	
Miner, C. C. Clerk, at \$840.....	630.00	
Collins, Flora P. Clerk, at \$840.....	350.00	
Phillips, Emma B. Clerk, at \$840.....	490.00	
Greene, Fred B. Clerk, at \$840.....	105.00	
Raymond, M. J. Clerk, at \$840.....	735.00	
Lederer, Birdie B. Clerk, at \$840.....	301.00	
Pray, Lloyd. Clerk, at \$840.....	539.00	
Noah, Esther. Clerk, at \$840.....	836.50	
Alexander, S. C. Clerk, at \$720.....	720.00	
Burns, Gertrude J. Clerk, at \$720.....	58.00	
Davenport, Mrs. Nell N. Clerk, at \$720.....	450.00	
Miner, C. C. Clerk, at \$720.....	180.00	
Burns, Gertrude J. Clerk, at \$720.....	124.00	
Helmick, Louise. Clerk, at \$720.....	146.00	
Wolf, Wm. H., jr. Clerk, at \$720.....	156.00	
Campbell, William S. Clerk, at \$720.....	720.00	
Eaton, C. E. Clerk, at \$720.....	720.00	
Eldridge, Joseph E. Clerk, at \$720.....	420.00	
Phillips, Emma B. Clerk, at \$720.....	300.00	
Foster, M. Adelaide. Clerk, at \$720.....	720.00	
Gallenne, Isabelle J. Clerk, at \$720.....	720.00	
Greene, Fred B. Clerk, at \$720.....	630.00	
Smith, Alice E. Clerk, at \$720.....	90.00	
Marscher, J. C., jr. Clerk, at \$720.....	452.00	
Pray, Lloyd. Clerk, at \$720.....	258.00	
Brent, N. W. Messenger, at \$840.....	693.00	
Wharton, J. J. Messenger, at \$840.....	840.00	
Kiefer, Clarence M. Messenger, at \$660.....	414.33	
Marscher, J. C., jr. Messenger, at \$660.....	245.67	
Kiefer, Clarence M. Messenger, at \$480.....	178.67	
Loutham, John W. Laborer, at \$720.....	40.00	
Beckman, G. E. Laborer, at \$660.....	720.00	
Keen, Jefferson. Charwoman, at \$540.....	561.00	
Dietz, Christine. Charwoman, at \$360.....	540.00	
Lee, B. E. Charwoman, at \$360.....	30.00	
West, Emma M. Charwoman, at \$360.....	324.00	
Tinney, Virginia. Charwoman, at \$360.....	360.00	
Total.....	101,794.15	
Unexpended balance.....	2,065.85	
Total amount of above appropriation.....	103,860.00	
		2 messengers or laborers, at \$660 each (two places at same salary combined)..... \$1,320.00
		1 messenger or messenger boy... 480.00
		1 charwoman..... 540.00
		2 charwomen, at \$360 each..... 720.00
		Total amount estimated (an apparent increase over 1911 of \$4,970).... 109,670.00
		NOTE.—An increase of \$4,970 is submitted. Of this sum \$720 is to cover the transfer of one messenger from the lump fund for general expenses, which fund has been reduced accordingly; \$2,800 is for the new places, and \$1,450 for promotions. Of the latter amount, \$1,000 is for the promotion of the chief of bureau, which is well deserved, and will make his salary more nearly agree with the salaries of other chiefs of bureaus in the departmental service. The changes in detail are as follows:
		Transfer from lump fund for general expenses:
		1 messenger from Administrative Expenses..... 720.00
		Promotions.
		1 statistician, who shall be chief of bureau..... 1,000.00
		1 assistant statistician..... 250.00
		1 chief clerk..... 200.00
		New places:
		1 clerk, class 1..... 1,200.00
		1 clerk..... 1,000.00
		4 clerks, at \$900 each..... 3,600.00
		5 clerks, at \$840 each..... 4,200.00
		12,170.00
		Places dropped:
		10 clerks, at \$720 each..... 7,200.00
		4,970.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.																																																																																																																																																																																																																																																																																				
<p>Salaries, Bureau of Statistics, 1910, \$103,860—Continued.</p> <p>The above force performed the following duties:</p> <p>ADMINISTRATIVE AND EXECUTIVE.</p> <p>Office of the statistician:</p> <table><tr><td>1 statistician.....</td><td>\$3,500.00</td></tr><tr><td>1 assistant statistician.....</td><td>2,500.00</td></tr><tr><td>1 clerk, class 4.....</td><td>1,800.00</td></tr><tr><td>3 clerks, class 3.....</td><td>4,800.00</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>\$12,600.00</td></tr></table> <p>Duties.—The administrative control of the work of the bureau and the supervision and inspection of its field service; supervision of original statistical investigations and reports; final computations for and preparation of the monthly crop reports; and general correspondence of the bureau on statistical and administrative subjects.</p> <p>Office of the chief clerk:</p> <table><tr><td>1 chief clerk.....</td><td>\$1,800.00</td></tr><tr><td>1 clerk, at \$1,300.....</td><td>1,300.00</td></tr><tr><td>2 clerks, class 1.....</td><td>2,400.00</td></tr><tr><td>1 clerk, at \$1,000.....</td><td>1,000.00</td></tr><tr><td>3 clerks, at \$720.....</td><td>2,160.00</td></tr><tr><td>1 messenger, at \$840.....</td><td>840.00</td></tr><tr><td>1 messenger, at \$660.....</td><td>660.00</td></tr><tr><td>1 messenger, at \$480.....</td><td>480.00</td></tr><tr><td>1 laborer, at \$720.....</td><td>720.00</td></tr><tr><td>1 laborer, at \$660.....</td><td>660.00</td></tr><tr><td>1 charwoman, at \$540.....</td><td>540.00</td></tr><tr><td>2 charwomen, at \$360.....</td><td>720.00</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>13,280.00</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>25,880.00</td></tr></table> <p>Duties.—General supervision of the work and personnel of the clerical force, messengers, and other employees; maintenance of the bureau's files and accounts; preparation of fiscal statements and estimates; purchase, custody and distribution of supplies; preparation of salary rolls and vouchers; and auditing of all expense accounts. Conducting correspondence relative to these matters and assisting in the general statistical and administrative correspondence of the bureau. In charge of the department's index and file of Congressional Records and documents.</p> <p>DIVISION OF DOMESTIC CROP REPORTS.</p> <p>Section of administration:</p> <table><tr><td>1 clerk, class 3.....</td><td>\$1,600</td></tr><tr><td>1 clerk, class 2.....</td><td>1,400</td></tr><tr><td>1 clerk, class 1.....</td><td>1,200</td></tr><tr><td>1 clerk, at \$1,000.....</td><td>1,000</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>\$5,200.00</td></tr></table> <p>Duties.—Supervision and direction of the work of the division; conducting correspondence with voluntary crop reporters; preparation of crop schedules.</p> <p>Section of township reports:</p> <table><tr><td>1 clerk, class 3.....</td><td>\$1,600</td></tr><tr><td>3 clerks, class 2.....</td><td>4,200</td></tr><tr><td>1 clerk, at \$1,300.....</td><td>1,300</td></tr><tr><td>5 clerks, class 1.....</td><td>6,000</td></tr><tr><td>1 clerk, at \$1,000.....</td><td>1,000</td></tr><tr><td>1 clerk, at \$840.....</td><td>840</td></tr><tr><td>3 clerks, at \$720.....</td><td>2,160</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>17,100.00</td></tr></table> <p>Duties.—Expert computers and tabulators, having direct charge of the maintenance of the list of township correspondents; editing and tabulating their monthly reports for consideration in connection with the preparation of the crop reports of the bureau; miscellaneous tabulations of special statistical data.</p> <p>Section of county reports:</p> <table><tr><td>2 clerks, class 4.....</td><td>\$3,600</td></tr><tr><td>1 clerk, class 3.....</td><td>1,600</td></tr><tr><td>3 clerks, class 2.....</td><td>4,200</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>9,400.00</td></tr></table> <p>Duties.—Expert computers and tabulators, having direct charge of the maintenance of the list of county correspondents; editing and tabulating their monthly reports for consideration in connection with the preparation of the crop reports 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3.....	\$1,600	1 clerk, class 2.....	1,400	1 clerk, class 1.....	1,200	1 clerk, at \$1,000.....	1,000		<hr/>		\$5,200.00	1 clerk, class 3.....	\$1,600	3 clerks, class 2.....	4,200	1 clerk, at \$1,300.....	1,300	5 clerks, class 1.....	6,000	1 clerk, at \$1,000.....	1,000	1 clerk, at \$840.....	840	3 clerks, at \$720.....	2,160		<hr/>		17,100.00	2 clerks, class 4.....	\$3,600	1 clerk, class 3.....	1,600	3 clerks, class 2.....	4,200		<hr/>		9,400.00	2 clerks, class 2.....	\$2,800	1 clerk, class 1.....	1,200	1 clerk, at \$1,000.....	1,000	1 clerk, at \$720.....	720		<hr/>		5,720.00	<p>Salaries, Bureau of Statistics, 1911, \$104,700—Continued.</p> <p>The above force is performing the following duties:</p> <p>ADMINISTRATIVE AND EXECUTIVE.</p> <p>Office of the statistician:</p> <table><tr><td>1 statistician.....</td><td>\$3,500.00</td></tr><tr><td>1 assistant statistician.....</td><td>2,500.00</td></tr><tr><td>2 clerks, class 4.....</td><td>3,600.00</td></tr><tr><td>2 clerks, class 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\$360.....</td><td>720.00</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>13,720.00</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>26,520.00</td></tr></table> <p>DIVISION OF DOMESTIC CROP REPORTS.</p> <p>Section of administration:</p> <table><tr><td>1 clerk, class 3.....</td><td>\$1,600</td></tr><tr><td>1 clerk, class 2.....</td><td>1,400</td></tr><tr><td>1 clerk, at \$720.....</td><td>720</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>\$3,720.00</td></tr></table> <p>Section of township reports:</p> <table><tr><td>3 clerks, class 2.....</td><td>4,200</td></tr><tr><td>1 clerk, at \$1,300.....</td><td>1,300</td></tr><tr><td>4 clerks, class 1.....</td><td>4,800</td></tr><tr><td>3 clerks, at \$1,000.....</td><td>3,000</td></tr><tr><td>1 clerk, at \$900.....</td><td>900</td></tr><tr><td>1 clerk, at \$840.....</td><td>840</td></tr><tr><td>2 clerks, at \$720.....</td><td>1,440</td></tr><tr><td></td><td><hr/></td></tr><tr><td></td><td>16,480.00</td></tr></table> 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\$840.....	840.00	1 messenger, at \$660.....	660.00	1 messenger, at \$480.....	480.00	1 laborer, at \$720.....	720.00	1 laborer, at \$660.....	660.00	1 charwoman, at \$540.....	540.00	2 charwomen, at \$360.....	720.00		<hr/>		13,720.00		<hr/>		26,520.00	1 clerk, class 3.....	\$1,600	1 clerk, class 2.....	1,400	1 clerk, at \$720.....	720		<hr/>		\$3,720.00	3 clerks, class 2.....	4,200	1 clerk, at \$1,300.....	1,300	4 clerks, class 1.....	4,800	3 clerks, at \$1,000.....	3,000	1 clerk, at \$900.....	900	1 clerk, at \$840.....	840	2 clerks, at \$720.....	1,440		<hr/>		16,480.00	2 clerks, class 4.....	3,600	1 clerk, class 3.....	1,600	2 clerks, class 2.....	2,800		<hr/>		8,000.00	1 clerk, class 2.....	1,400	1 clerk, class 1.....	1,200	1 clerk, at \$1,000.....	1,000	2 clerks, at \$720.....	1,440		<hr/>		5,040.00	<p>Salaries, Bureau of Statistics, 1912, \$109,670—Continued.</p> <p>The above force will perform the following duties:</p> <p>ADMINISTRATIVE AND EXECUTIVE.</p> <p>Office of the 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(Included under Miscellaneous section.)</p>	1 statistician.....	\$4,500.00	1 assistant statistician.....	2,750.00	2 clerks, class 4.....	3,600.00	2 clerks, class 3.....	3,200.00		<hr/>		\$14,050.00	1 chief clerk.....	2,000.00	1 clerk, at \$1,300.....	1,300.00	1 clerk, class 1.....	1,200.00	1 clerk, at \$1,000.....	1,000.00	2 clerks, at \$900.....	1,800.00	1 clerk, at \$840.....	840.00	1 messenger, at \$840.....	840.00	1 messenger, at \$660.....	660.00	1 messenger, at \$480.....	480.00	1 laborer, at \$720.....	720.00	1 laborer, at \$660.....	660.00	1 charwoman, at \$540.....	540.00	2 charwomen, at \$360.....	720.00		<hr/>		12,760.00		<hr/>		26,810.00	1 clerk, class 3.....	\$1,600	1 clerk, class 2.....	1,400	1 clerk, at \$900.....	900		<hr/>		\$3,900.00	3 clerks, class 2.....	4,200	1 clerk, at \$1,300.....	1,300	4 clerks, class 1.....	4,800	3 clerks, at \$1,000.....	3,000	1 clerk, at \$900.....	900	3 clerks, at \$840.....	2,520		<hr/>		16,720.00	2 clerks, class 4.....	3,600	1 clerk, class 3.....	1,600	2 clerks, class 2.....	2,800		<hr/>		8,000.00
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*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912
<i>Salaries, Bureau of Statistics, 1910, \$103,860—Continued.</i>	<i>Salaries, Bureau of Statistics, 1911, \$104,700—Continued.</i>	<i>Salaries, Bureau of Statistics, 1912, \$109,670—Continued.</i>
DIVISION OF DOMESTIC CROP REPORTS—continued.	DIVISION OF DOMESTIC CROP REPORTS—cont'd.	DIVISION OF DOMESTIC CROP REPORTS—cont'd.
Miscellaneous section:	Miscellaneous section:	Miscellaneous section:
2 clerks, class 1..... \$2,400	2 clerks, class 3..... \$3,200	2 clerks, class 3..... \$3,200
2 clerks, at \$1,000..... 2,000	1 clerk, class 2..... 1,400	2 clerks, class 2..... 2,800
\$4,400.00	2 clerks, class 1..... 2,400	3 clerks, class 1..... 3,600
	2 clerks, at \$1,000..... 2,000	4 clerks, at \$1,000..... 4,000
	\$9,000.00	2 clerks, at \$840..... 1,680
		\$15,280.00
<i>Duties.</i> —Expert computers and tabulators of miscellaneous data for statistical tables, reports, bulletins, etc., having charge of the maintenance of lists of special correspondents, and assisting in the final summarizing of data for use by the crop reporting board; computers, tabulators, and nonstatistical clerks having charge of miscellaneous lists of correspondents of minor character, who assist in the computation and tabulation of miscellaneous data, and in the distribution and dispatch of mail; typewriting and general clerical work.		
Mailing section:	Mailing section:	Mailing section:
3 clerks, class 1..... \$3,600	3 clerks, class 1..... 3,600	3 clerks, class 1..... 3,600
1 clerk, at \$900..... 900	1 clerk, at \$900..... 900	1 clerk, at \$900..... 900
1 clerk, at \$840..... 840	2 clerks, at \$840..... 1,680	3 clerks, at \$840..... 2,520
2 clerks, at \$720..... 1,440	2 clerks, at \$720..... 1,440	1 messenger, at \$720.. 720
6,780.00	7,620.00	7,740.00
48,600.00	49,860.00	51,640.00
<i>Duties.</i> —Receiving, distributing, and dispatching mail of the bureau, including county, township, and special schedules and returns.		
EDITORIAL DIVISION AND LIBRARY.	EDITORIAL DIVISION AND LIBRARY.	EDITORIAL DIVISION AND LIBRARY.
Editorial section:	Editorial section:	Editorial section:
1 clerk, class 4..... \$1,800	1 clerk, class 4..... \$1,800	1 clerk, class 4..... 1,800
2 clerks, class 3..... 3,200	1 clerk, class 3..... 1,600	1 clerk, class 1..... 1,200
1 clerk, class 1..... 1,200	2 clerks, class 1..... 2,400	\$3,000.00
1 clerk, at \$1,000..... 1,000	1 clerk, at \$1,000..... 1,000	
1 messenger, at \$840..... 840	1 messenger, at \$840... 840	
\$8,040.00	\$7,640.00	
<i>Duties.</i> —Under the direct supervision of the chief of division this section is engaged in editing all manuscript prepared in the bureau; preparing monthly review of crop conditions in foreign countries; reviewing statistical trade journals and official publications; translating from foreign languages letters, papers, etc., and preparing miscellaneous data for publication in the Crop Reporter.		
Research section:		Research section:
<i>Duties:</i> Engaged, under the direction of the chief of division, in scientific statistical research from original sources; conducting special correspondence relative to statistical and economic subjects; preparing statistical reports for bulletins on matters relating to agriculture; the compilation of data for use in official publications, involving a knowledge of foreign languages and an acquaintance with statistical publications of all countries of importance.		1 clerk, class 3..... 1,600
Library section:	Library section:	3 clerks, class 1..... 3,600
1 clerk, class 2..... \$1,400	2 clerks, class 2..... 2,800	1 clerk, at \$1,000..... 1,000
1 clerk, at \$1,000..... 1,000	1 clerk, at \$1,000..... 1,000	6,200.00
2,400.00	3,800.00	
<i>Duties.</i> —Care and management of the bureau library under the direction and supervision of the chief of division, including the maintenance of a card index by subjects and countries of the agricultural statistics in all publications received.		Library section:
Typewriting section:	Typewriting section:	2 clerks, class 2..... 2,800
1 clerk, at \$1,000..... \$1,000	1 clerk, at \$900..... 900	1 clerk, at \$1,000..... 1,000
1 clerk, at \$900..... 900	1 clerk, at \$720..... 720	1 messenger at \$840... 840
2 clerks at \$840..... 1,680		4,640.00
3,580.00	1,620.00	
14,020.00	13,060.00	1,740.00
		15,580.00
DIVISION OF PRODUCTION AND DISTRIBUTION.	DIVISION OF PRODUCTION AND DISTRIBUTION.	DIVISION OF PRODUCTION AND DISTRIBUTION.
2 clerks, class 4..... \$3,600	1 clerk, class 4..... \$1,800	1 clerk, class 4..... \$1,800
1 clerk, class 3..... 1,600	2 clerks, class 3..... 3,200	2 clerks, class 3..... 3,200
2 clerks, class 2..... 2,800	1 clerk, class 2..... 1,400	2 clerks, class 2..... 2,800
1 clerk, class 1..... 1,200	3 clerks, class 1..... 3,600	2 clerks, class 1..... 2,400
1 clerk, at \$1,000..... 1,000	1 clerk, at \$1,000..... 1,000	1 clerk at \$1,000..... 1,000
4 clerks, at \$900..... 3,600	3 clerks, at \$900..... 2,700	4 clerks, at \$900..... 3,600
1 clerk, at \$840..... 840	1 clerk, at \$840..... 840	1 clerk, at \$840..... 840
1 clerk at \$720..... 720	1 clerk, at \$720..... 720	
\$15,360.00	\$15,260.00	\$15,640.00
103,860.00	104,700.00	109,670.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Bureau of Statistics, 1910, \$103,860—Continued.</i>	<i>Salaries, Bureau of Statistics, 1911, \$104,700—Continued.</i>	<i>Salaries, Bureau of Statistics, 1912, \$109,670—Continued.</i>
DIVISION OF PRODUCTION AND DISTRIBUTION—continued.	DIVISION OF PRODUCTION AND DISTRIBUTION—continued.	DIVISION OF PRODUCTION AND DISTRIBUTION—continued.
<p><i>Duties.</i>—Concerned with the production of wealth on farms, with the distribution of farm products at home and abroad, and with the economic conditions pertaining to the agricultural element of the population. This work includes the preparation and publication of bulletins and tables concerning the agricultural exports and imports of all countries publishing this information; the cost of transportation from farms to local markets, as well as to central markets, seaports, and foreign markets; freight rates on agricultural products by rail and water within the United States; economic and cooperative movements among agriculturists, including the questions of agricultural capital and labor; the preparation of those parts of the Year-book agricultural statistics referring to production, exports, and imports. In this division is handled, also, special correspondence relating to the foregoing subjects and covering a wide range of information.</p> <p><i>General expenses, Bureau of Statistics, 1910, \$117,060.</i></p> <p>ITEMS OF EXPENDITURE.</p> <p>Lump-fund salaries:</p> <p>In Washington..... \$10,377.22</p> <p>Outside Washington..... 59,136.64</p> <p>Stationery..... 5,532.51</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 4,065.66</p> <p>Furniture..... 734.98</p> <p>Freight..... 81.18</p> <p>Express..... 19.75</p> <p>Telegraph..... 359.86</p> <p>Telephone..... 39.42</p> <p>Apparatus, instruments, and laboratory material..... 14.65</p> <p>Travel and station and field expenses..... 27,632.13</p> <p>Total expenditures to Aug. 31, 1910..... 107,994.00</p> <p>Outstanding liabilities..... \$4,623.89</p> <p>Less repayments to credit of appropriation..... 88.61</p> <p>4,535.28</p> <p>Balance to be turned back into treasury (estimated)..... 4,530.72</p> <p>Total amount of above appropriation..... 117,060.00</p> <p>NOTE.—The maintenance of the projects shown under the following subappropriations is contributed to by all appropriations of the bureau. A detailed statement, showing the total cost of each project, appears as "Projects (F)."</p> <p>Administrative expenses, \$23,360:</p> <p>Lump-fund salaries in Washington..... 10,377.22</p> <p>Stationery..... 5,532.51</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 4,065.66</p> <p>Furniture..... 734.98</p> <p>Freight..... 81.18</p> <p>Express..... 19.75</p> <p>Telegraph..... 359.86</p> <p>Telephone..... 39.42</p> <p>Apparatus..... 14.65</p> <p>Total expenditures to August 31, 1910..... 21,225.23</p> <p>Outstanding liabilities (estimated)..... 1,349.54</p> <p>Balance to be turned back into Treasury (estimated)..... 785.23</p> <p>Total amount of above appropriation..... 23,360.00</p> <p>The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were for the following objects:</p>	<p><i>General expenses, Bureau of Statistics, 1911, \$115,620.</i></p> <p>ITEMS OF EXPENDITURE.</p> <p>Lump-fund salaries:</p> <p>In Washington..... \$13,020.00</p> <p>Outside Washington..... 59,650.00</p> <p>Stationery..... 6,000.00</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 3,700.00</p> <p>Furniture..... 1,200.00</p> <p>Freight..... 150.00</p> <p>Express..... 100.00</p> <p>Telegraph..... 650.00</p> <p>Telephone..... 100.00</p> <p>Travel and station and field expenses..... 31,050.00</p> <p>Total amount of above appropriation (an apparent decrease from 1910 of \$1,440)..... 115,620.00</p> <p>NOTE.—The apparent decrease from the 1910 appropriation is \$1,440; the actual decrease is only \$600, as \$840 represents a transfer to the statutory roll.</p> <p>NOTE.—The maintenance of the projects shown under the following subappropriations is contributed to by all appropriations of the bureau. A detailed statement, showing the amount allotted for each project appears as "Projects (F)."</p> <p>Administrative expenses, \$24,920:</p> <p>Lump-fund salaries in Washington..... 13,020.00</p> <p>Stationery..... 6,000.00</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 3,700.00</p> <p>Furniture..... 1,200.00</p> <p>Freight..... 150.00</p> <p>Express..... 100.00</p> <p>Telegraph..... 650.00</p> <p>Telephone..... 100.00</p> <p>Total amount of above appropriation..... 24,920.00</p> <p>The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being applied to the following objects:</p>	<p><i>General expenses, Bureau of Statistics, 1912, \$124,900.</i></p> <p>ITEMS OF EXPENDITURE.</p> <p>Lump-fund salaries:</p> <p>In Washington..... \$12,300.00</p> <p>Outside Washington..... 64,750.00</p> <p>Stationery..... 6,000.00</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 3,700.00</p> <p>Furniture..... 1,200.00</p> <p>Freight..... 150.00</p> <p>Express..... 100.00</p> <p>Telegraph..... 650.00</p> <p>Telephone..... 100.00</p> <p>Travel and station and field expenses..... 35,950.00</p> <p>Total amount estimated (an apparent increase from 1911 of \$9,280)..... 124,900.00</p> <p>NOTE.—The apparent increase over the 1911 appropriation is \$9,280; the actual increase is \$10,000; this appropriation being decreased by \$720 by transfer to the statutory roll.</p> <p>NOTE.—The maintenance of the projects shown under the following subappropriations is contributed to by all appropriations of the bureau. A detailed statement, showing the total estimate for each project appears as "Projects (F)."</p> <p>Administrative expenses, \$24,200:</p> <p>Lump-fund salaries in Washington..... 12,300.00</p> <p>Stationery..... 6,000.00</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 3,700.00</p> <p>Furniture..... 1,200.00</p> <p>Freight..... 150.00</p> <p>Express..... 100.00</p> <p>Telegraph..... 650.00</p> <p>Telephone..... 100.00</p> <p>Total amount estimated..... 24,200.00</p> <p>The above estimates, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are submitted for the following objects:</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.		Appropriations for the current fiscal year ending June 30, 1911.		Estimated expenditures for the fiscal year ending June 30, 1912.	
<i>General expenses, Bureau of Statistics, 1910, \$117,060—Continued.</i>		<i>General expenses, Bureau of Statistics, 1911, \$115,620—Continued.</i>		<i>General expenses, Bureau of Statistics, 1912, \$124,900—Continued.</i>	
PROJECTS (A).		PROJECTS (A).		PROJECTS (A).	
Bulletins.....	\$3,316.41	Bulletins.....	\$3,600.00	Bulletins.....	\$3,600.00
Bureau publications of more or less magnitude, containing comprehensive information concerning special agricultural products or economic subjects pertaining to agriculture, such as the production and value of important crops through a long period of years, production and consumption, cost of production, expenses and methods of marketing, imports and exports, foreign production, etc. The range of subjects is as broad as the fundamental occupation to which they all relate. The bulletins upon which work was performed and the amount expended for each are shown in detail in the project statement for the total expenditures of the bureau.					
Crop report.....	12,443.23	Crop report.....	14,000.00	Crop report.....	13,280.00
The stationery, supplies, office equipment, etc., used by the agents and employees of the bureau in connection with the preparation and publication of its monthly crop reports, is furnished by this appropriation, and from it is also paid a portion of the salaries for the monthly compilation and tabulation of data, received from various sources, showing the acreage, condition during the growing season, final yield, value, etc., of important farm products by States, and the annual tabulation of data showing the number, value, and status of farm animals upon which the estimates of the bureau for publication are based.					
Crop Reporter.....	914.07	Crop Reporter.....	1,000.00	Crop Reporter.....	1,000.00
Cost of editing and preparation of special data.....					
An 8-page monthly publication, containing full data, by States, of the crop situation in the United States, showing, in successive months, the acreage, condition, yield, and value of all important crops and, in February, the number and value of farm animals, with comparisons for preceding months and years. It contains each month a summary of the crop situation in the principal countries of the world, gathered from the official statements of foreign governments or, when these are not available, from such other sources as are generally recognized as reliable.					
It is also a vehicle for the dissemination of special statistical data of interest to the agricultural community, as the farm prices of agricultural products and the prices of the same in various trade centers, stocks on hand, exports and imports, production and consumption, etc.					
The cost of publication is borne by the department's appropriation for that purpose.					
Inquiries, special.....	1,733.70	Inquiries, special.....	1,800.00	Inquiries, special.....	1,800.00
Scientific statistical research work; compilation and tabulation of data for inclusion in special tables and correspondence occasioned by requests upon the bureau from statesmen, executive departments and bureaus, State and foreign governments, educators, associations, etc., for statistical data not assembled in the form desired, or not readily accessible.					
This work is inevitably associated with the position of the bureau as the first authority in the United States on agricultural statistics.					
Investigations, special.....	1,930.56	Investigations, special.....	2,200.00	Investigations, special.....	2,200.00
Investigations into a variety of statistical subjects, relating to the agricultural interests of the United States, are being carried on constantly; many with a view to accumulating material for bureau publications, some for the purpose of testing the accuracy of conclusions derived from other sources, and others to confirm or disprove the value of existing or proposed methods of obtaining statistical data.					
Library.....	502.81	Library.....	500.00	Library.....	500.00
The bureau library of agricultural statistics contains a collection of statistical reports and other official publications issued by foreign governments; by departments and bureaus of the United States Government; by departments of agriculture and various other branches of State governments; by chambers of commerce and boards of trade, and files of leading trade journals and commercial bulletins, making it pre-eminent among similar collections in the United States and probably second to none in the world.					
Yearbook and statistical appendix.....	618.03	Yearbook and statistical appendix.....	600.00	Yearbook and statistical appendix.....	600.00
Preparation of articles on matters related to the work of this bureau for inclusion in the department's yearbook, and of the agricultural statistics contained in the statistical appendix to that publication, including statements showing the production of the principal crops and the numbers of live stock at home and abroad for a period of five years; and, for the United States, the acreage, yield, farm price, and farm value of the same for a long series of years; and, by States, the acreage, production, and farm value, average yield and farm value per acre, and farm price per unit of measure, each year for 10 years; the wholesale price per unit of measure in the principal markets of the United States, monthly, for a period of five years; the exports and imports of the principal crops; similar data for farm animals, and for both vegetable and animal products, as sugar, flour, wool, and hides; transportation rates by rail and water, etc.					

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Bureau of Statistics, 1910, \$117,060—Continued.</i>	<i>General expenses, Bureau of Statistics, 1911, \$115,620—Continued.</i>	<i>General expenses, Bureau of Statistics, 1912, \$124,900—Continued.</i>
PROJECTS (A)—continued.	PROJECTS (A)—continued.	PROJECTS (A)—continued.
Work for other bureaus. .... \$1,115.93 The statistical data accumulated by other bureaus of the department in connection with their investigations are compiled in this bureau when its regular work is not thereby obstructed.	Work for other bureaus. .... \$1,220.00	Work for other bureaus. .... \$1,220.00
22,574.77	24,920.00	24,200.00
<i>Special field agents, \$56,000.</i>	<i>Special field agents, \$56,000.</i>	<i>Special field agents, \$63,500.</i>
Lump-fund salaries outside Washington. .... \$30,203.31	Lump-fund salaries outside Washington. .... \$30,250.00	Lump-fund salaries outside Washington. .... \$34,450.00
Travel and station and field expenses. .... 21,995.71	Travel and station and field expenses. .... 25,750.00	Travel and station and field expenses. .... 29,050.00
Total expenditures to Aug. 31, 1910. .... 52,199.02	Total amount of above appropriation. .... 56,000.00	Total amount estimated .. 63,500.00
Outstanding liabilities (estimated) ..... \$2,522.01		
Less repayments to credit of appropriation. .... 88.61		
2,433.40		
Balance to be turned back into Treasury (estimated)..... 1,367.58		
Total amount of above appropriation. .... 56,000.00		
The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were for the following objects:	The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being applied to the following objects:	The above estimates, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are submitted for the following objects:
PROJECTS (B).	PROJECTS (B).	PROJECTS (B).
Crop report. .... 54,632.42 Special field agents travel within certain prescribed territories, comprising several contiguous States selected with regard to similarity of soils, climate, and products, for the purpose of securing information concerning acreage, yield, and production of crops by personal observation and by inquiry among producers, dealers, consumers, and others whose interests bring them in close touch with agricultural conditions. Reports are rendered to the bureau at stated intervals, to be considered by the crop reporting board in determining the figures for its monthly report. Two of these agents devote their entire time and attention to the special crops of rice and tobacco.	Crop report. .... 56,000.00	Crop report. .... 63,500.00
<i>State statistical agents, \$32,700.</i>	<i>State statistical agents, \$30,200.</i>	<i>State statistical agents, \$32,200.</i>
Lump-fund salaries outside Washington. .... \$26,600.00	Lump-fund salaries outside Washington. .... \$26,900.00	Lump-fund salaries outside Washington. .... \$27,800.00
Travel and station and field expenses. .... 3,575.97	Travel and station and field expenses. .... 3,300.00	Travel and station and field expenses. .... 4,400.00
Total expenditures to Aug. 31, 1910. .... 30,175.97	Total amount of above appropriation. .... 30,200.00	Total amount estimated. .... 32,200.00
Outstanding liabilities (estimated) ..... 533.55		
Balance to be turned back into Treasury (estimated)..... 2,020.48		
Total amount of above appropriation. .... 32,700.00		
The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were for the following objects:	The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being applied to the following objects:	The above estimates, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are submitted for the following objects:
PROJECTS (C).	PROJECTS (C).	PROJECTS (C).
Crop report. .... 30,679.52 State statistical agents report at stated intervals upon the acreage, condition, yield, etc., of the crops growing in their respective States. This information is derived principally from a corps of correspondents, located throughout the State, several in each county of agricultural importance. When sufficient funds are available they make annual or semiannual trips through the different sections of their States, in order to ascertain by personal observation and inquiry the agricultural conditions obtaining in the different sections and to secure new aids and instruct those who have been rendering reports.	Crop report. .... 30,200.00	Crop report. .... 32,200.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Special investigations, \$2,500.</i>	<i>Special investigations, \$2,000.</i>	<i>Special investigations, \$2,500.</i>
Travel and station and field expenses..... \$1,962.00	Travel and station and field expenses..... \$2,000.00	Travel and station and field expenses..... \$2,500.00
Total expenditures to Aug. 31, 1910..... 1,962.00		
Outstanding liabilities (estimated)..... 228.79		
Balance to be turned back into Treasury (estimated)..... 309.21		
<b>Total amount of above appropriation..... 2,500.00</b>	<b>Total amount of above appropriation..... 2,000.00</b>	<b>Total amount estimated..... 2,500.00</b>
The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were for the following objects:	The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being applied to the following objects:	The above estimate, classified in accordance with the suggestion of the congressional committee on expenditures for this department, is for the following objects:
PROJECTS (D).	PROJECTS (D).	PROJECTS (D).
Bulletins..... 415.79		
Travel performed by officials of the bureau for the purpose of collecting data for inclusion in bureau publications.		
Crop report..... 930.83	Crop report..... 1,250.00	Crop report..... 1,750.00
Inspection of the offices and work of the State statistical agents and special field agents is found to be of great value in the interest of efficiency and uniformity in the work of the field force of the bureau. Travel of officials from Washington for this purpose is charged against this project.		
Investigations, special..... 844.17	Special investigations..... 750.00	Special investigations..... 750.00
Travel performed by officials of the bureau for the collection of special data and investigation into various statistical subjects related to the agricultural interests of the United States, and conducting occasional investigations into European methods of collecting agricultural statistics, the cooperative distribution of agricultural products and the cooperative buying of farmers' supplies in European countries.		
<b>2,190.79</b>	<b>2,000.00</b>	<b>2,500.00</b>
<i>Cost of producing farm products, \$2,500.</i>	<i>Cost of producing farm products, \$2,500.</i>	<i>Cost of producing farm products, \$2,500.</i>
Lump fund salaries outside Washington..... \$2,333.33	Lump fund salaries outside Washington..... \$2,500.00	Lump fund salaries outside Washington..... \$2,500.00
Travel and station and field expenses..... 98.45		
Total expenditures to Aug. 31, 1910..... \$2,431.78		
Outstanding liabilities (estimated)..... 20.00		
Balance to be turned back into Treasury (estimated)..... 48.22		
<b>Total amount of above appropriation..... 2,500.00</b>	<b>Total amount of above appropriation..... 2,500.00</b>	<b>Total amount estimated..... 2,500.00</b>
The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were for the following object:	The expenditures under the above appropriation, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being applied to the following objects:	The above estimate, classified in accordance with the suggestion of the congressional committee on expenditures for this department, is submitted for the following object:
PROJECT (E).	PROJECT (E).	PROJECT (E).
Cooperative work with Minnesota State experiment station. 2,451.78	Cooperative work with Minnesota State experiment station..... 2,500.00	Cooperative work with Minnesota State experiment station. 2,500.00
This work has been carried on for several years and is producing fruitful results in showing the detailed cost of producing farm products under a variety of conditions as to soil, location, facilities, and management, and for both diversified and specialized products.		
<b>Total amount of appropriation "General expenses"..... 117,060.00</b>	<b>Total amount of appropriation "General expenses"..... 115,620.00</b>	<b>Total amount of appropriation "General expenses"..... 124,900.00</b>
The total expenditures of the Bureau of Statistics, set forth under the above appropriations, were applied to the objects stated in detail below:	The appropriations for the Bureau of Statistics are being applied to the objects stated in detail below:	The estimates for the Bureau of Statistics are submitted for appropriation for the objects stated in detail below:
PROJECTS.	PROJECTS.	PROJECTS.
Bulletins:	Bulletins:	Bulletins:
Publications of more or less magnitude, containing comprehensive information concerning special agricultural products or economic subjects pertaining to agriculture, such as the production and value of important crops through a long period of years, production and consumption, cost of production, expenses and methods of marketing, imports and exports, foreign production, etc. The range of subjects is as broad as the fundamental occupation to which they all relate.	Unpublished bulletins, being prepared in 1910, are being carried forward toward completion, and new ones have been started under the following titles:	
The bulletins upon which work was performed, and the amount expended for each, are as follows:	Russian cereal crops.	
(51) Foreign trade of the United States in forest products..... 280.84	Transportation of farm products on inland waterways.	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Cost of producing farm products, \$2,500—Continued.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Bulletins—Continued.	Bulletins—Continued.	Bulletins—Continued.
(56 to 63) Corn, wheat, oat, barley, rye, buckwheat, potato, and hay crops of the United States, 1866-1906 (revision)	\$770.86	
(70) Imports of farm and forest products, 1905-1907, by countries from which consigned	25.96	
(74) Imports of farm products into the United States, 1851-1908	485.20	
(75) Exports of farm products from the United States, 1851-1908	386.71	
(76) Imports of farm and forest products, 1906-1908, by countries from which consigned	66.35	
(77) Exports of farm and forest products, 1906-1908, by countries to which consigned	305.78	
(78) Agricultural graphics	269.15	
(79) The world production, trade, and consumption of coffee	1,949.85	
(80) The world production, distribution and consumption of coconuts and their products	1,094.13	
(81) Grain movement in the Great Lakes region (in press)	5,524.30	
(82) Imports of farm and forest products, 1907-1909, by countries from which consigned (in press)	720.93	
(83) Exports of farm and forest products, 1907-1909, by countries to which consigned (in press)	720.93	
Balkan agriculture	1,739.63	
Chronology of United States agriculture (unpublished)	33.79	
Crop movement and transportation facilities of the Pacific coast (unpublished)	1,223.36	
Dates of planting and maturity of crops in the United States and foreign countries (unpublished)	4,675.55	
Transportation of farm products on inland waterways (unpublished)	40.67	
Farm wages (unpublished)	2,125.82	
Circular No. 18. Tobacco districts and types	12.72	
Total	20,452.53	
Crop reports:	Crop reports:	Crop reports:
Object— To make public estimates concerning the acreage, condition, final yield, farm value, etc., of important farm products, at stated intervals, based on the compilation and tabulation of data collected monthly from various sources; and, annually, concerning the number, value, etc., of farm animals. Sources of information, field service— Special field agents, who travel within prescribed territories, each embracing several contiguous States, preferably those having similar soils, climate, and products, and ascertain agricultural conditions by personal observation and by inquiry among leading producers, dealers, consumers, and others who, by reason of business relations or other interests, are well informed on the subjects reported upon.		
Salaries..... \$30,203.31 Traveling expenses..... 24,429.11	Salaries..... \$30,250.00 Traveling expenses..... 25,750.00	Salaries..... \$34,450.00 Traveling expenses..... 29,050.00
54,632.42	56,000.00	63,500.00
This class includes two agents who devote their entire time and attention to the special crops of rice and tobacco, respectively. State statistical agents, who report each for a single State, deriving their information principally from a corps of correspondents, several in each county. They travel through their territories once or twice yearly to ascertain the agricultural conditions by personal observation and inquiry, and incidentally to visit their aids and secure new ones.	State statistical agents—	State statistical agents—
Salaries..... \$26,600.00 Traveling expenses..... 4,079.52	Salaries..... \$26,900.00 Traveling expenses..... 3,300.00	Salaries..... \$27,800.00 Traveling expenses..... 4,400.00
30,679.52	30,200.00	32,200.00
Inspection of field service..... 930.83 County correspondents, about 2,800, who report directly to the bureau from each county of agricultural importance, basing their figures upon personal observation and inquiry, and upon reports from several assistants located in different parts of their respective counties. No material compensation is provided for the services of these correspondents other than department publications and seed. Township correspondents, about 32,000 in all, an average of about 11 to each county, who report to the bureau the crop conditions in their respective territories. No compensation is afforded these reporters other than department publications and seed. All of the above-mentioned classes of correspondents report monthly, giving information appropriate to the season concerning the agricultural products within the respective areas indicated.	Inspection of field service.. 1,250.00	Inspection of field service.. 1,750.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Cost of producing farm products, \$2,500—Continued.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Crop reports—Continued.	Crop reports—Continued.	Crop reports—Continued.
In addition to the above regular lists of correspondents are the following:		
Individual representative farmers, who report once a year concerning the yield of important crops upon their individual farms; and in addition a spring report, relating to the acreage of cotton, is received from those residing in the cotton States.		
Special cotton list of bankers, merchants, etc., reporting twice yearly to the question of acreage in the spring and yield in the fall of cotton.		
Ginners, in the cotton States only, reporting twice a year to the question of acreage in the spring and yield in the fall of cotton.		
Mills and elevators, reporting once a year, to the question of yield per acre of grain.		
Several lists of large producers, who render reports on special crops, as tobacco, apples, potatoes, etc.		
No compensation, except publications and seed.		
Preparation—	Preparation.....	Preparation.....
These data obtained are compiled and tabulated by the clerical force of the bureau.	\$51,520.00	\$53,720.00
Salaries.....		
Publicity—		
The bureau crop reports are published monthly at stated times through the medium of telegraph companies and press associations, and as rapidly thereafter as possible through special newspaper correspondents, granges, agricultural journals, etc. These reports are also included in the bureau's monthly issue of the Crop Reporter, 160,000 copies of which are printed and mailed immediately after the estimates are made public.		
The cost of publication of this periodical is borne by the department's appropriation for publications.	Supplies.....	Supplies.....
Supplies: The cost of office furniture, equipment and stationery required by the field service, voluntary correspondents, and clerical force of the bureau in compiling and tabulating the data for crop reports... \$9,763.19	\$10,000.00	\$10,500.00
Freight, express, telephone, and telegraph charges.....	Freight, express, telephone, and telegraph charges.....	Freight, express, telephone, and telegraph charges.....
518.18	850.00	900.00
Total expenditures for crop reports during the year 1910.....	Total expenditures proposed for crop reports during the year 1911.....	Total amount estimated for crop reports during the year 1912.....
146,756.21	49,820.00	162,570.00
Crop Reporter: Cost of editing and preparation of special data.....	Crop Reporter.....	Crop Reporter.....
2,089.22	2,000.00	2,000.00
An eight-page monthly publication, containing full data, by States, of the crop situation in the United States, showing in successive months the acreage, condition, yield, and value of all important crops, and, in February, the number and value of farm animals, with comparisons for preceding months and years. It contains each month a summary of the crop situation in the principal countries of the world, gathered from the official statements of foreign governments, or, when these are not available, from such other sources as are generally recognized as reliable.		
It is also a vehicle for the dissemination of special statistical data of interest to the agricultural community, as the farm prices of agricultural products and the prices of the same in various trade centers, stocks on hand, exports and imports, production and consumption, etc.		
The cost of publication is borne by the department's appropriation for that purpose.		
Inquiries, special.....	Inquiries, special.....	Inquiries, special.....
9,080.24	10,000.00	10,000.00
Scientific statistical research work; compilation and tabulation of data for inclusion in special tables and correspondence occasioned by requests upon the bureau from statesmen, executive departments and bureaus, State and foreign governments, educators, associations, etc., for statistical data not assembled in the form desired, or not readily accessible.		
This work is inevitably associated with the position of the bureau as the first authority in the United States on agricultural statistics.		
Investigations, special.....	Investigations, special.....	Investigations, special.....
16,047.20	16,000.00	16,000.00
Investigations into a variety of statistical subjects, relating to the agricultural interests of the United States are being carried on constantly; many with a view to accumulating material for bureau publications, some for the purpose of testing the accuracy of conclusions derived from other sources, and others to confirm or disprove the value of existing or proposed methods of obtaining statistical data.		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Bureau of Statistics—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Cost of producing farm products, \$2,500—Continued.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>	<i>Cost of producing farm products, \$2,500—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Library..... \$6,564.04 The bureau library of agricultural statistics contains a collection of statistical reports and other official publications issued by foreign governments; by departments of agriculture and various other branches of State governments; by chambers of commerce and boards of trade, and files of leading trade journals and commercial bulletins, making it pre-eminent among similar collections in the United States, and probably second to none in the world.	Library..... \$7,000.00	Library..... \$7,500.00
Yearbook and statistical appendix..... 7,077.92 Preparation of articles on matters related to the work of this bureau for inclusion in the department's yearbook and of the agricultural statistics contained in the statistical appendix to that publication, including statements showing the production of the principal crops and the number of live stock at home and abroad for a period of five years; and, for the United States, the acreage, yield, farm price, and farm value of the same for a long series of years; and, by States, the acreage, production, and farm value, average yield and farm value per acre, and farm price per unit of measure, each for 10 years; the wholesale prices per unit of measure in the principal markets of the United States, monthly, for a period of five years; the exports and imports of the principal crops; similar data for farm animals, and for both vegetable and animal products, as sugar, flour, wool, and hides; transportation rates by rail and water, etc.	Yearbook and statistical appendix..... 8,000.00	Yearbook and statistical appendix..... 8,000.00
Work for other bureaus..... 3,804.29 The statistical data accumulated by other bureaus of the department in connection with their investigations are compiled in this bureau when its regular work is not thereby obstructed.	Work for other bureaus..... 4,000.00	Work for other bureaus..... 4,000.00
Cooperative work with Minnesota State Experiment Station..... 2,451.78 This work has been carried on for several years and is producing fruitful results in showing the detailed cost of producing farm products under a variety of conditions as to soil, location, facilities, and management, and for both diversified and specialized products.	Cooperative work with Minnesota State Experiment Station..... 2,500.00	Cooperative work with Minnesota State Experiment Station..... 2,500.00
Grand total..... 214,323.43	Grand total..... 220,320.00	Grand total..... 234,570.00
Total of all appropriations for Bureau of Statistics..... 220,920.00	Total of all appropriations for Bureau of Statistics (a decrease from 1910 of \$600)..... 220,320.00	Total amount estimated for Bureau of Statistics (an increase over 1911 of \$14,250)..... 234,570.00
Total expenditures to Aug. 31, 1910..... 209,788.15		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... \$4,623.89		
Less repayment to credit of appropriations..... 88.61		
Balance to be turned back into Treasury (estimated)..... 4,535.28		
6,596.57		

## LIBRARY.

Salaries, library, Department of Agriculture, 1910, \$19,320.	Salaries, library, Department of Agriculture, 1911, \$19,920.	Salaries, library, Department of Agriculture, 1912, \$23,000.
Barnett, C. R..... Librarian, at \$2,000..... \$1,999.99	1 librarian..... \$2,000.00	1 librarian..... \$2,000.00
Hawks, E. B..... Assistant librarian, at \$1,400..... 1,399.99	1 assistant librarian..... 1,400.00	1 clerk, class 3 (submitted)..... 1,600.00
Knapp, A. R..... Clerk, class 1..... 1,200.00	2 clerks, class 1, one of whom shall be a translator..... 2,400.00	1 clerk, class 2 (in lieu of 1 assistant librarian at \$1,400)..... 1,400.00
Upton, G. E..... Clerk, class 1..... 1,200.00	2 cataloguers, at \$1,200 each..... 2,400.00	2 clerks, 1 of whom shall be a translator..... 2,400.00
Sewall, Harriet W..... Cataloguer, at \$1,200..... { 96.66	3 cataloguers, at \$1,000 each..... 3,000.00	3 clerks, at \$1,000 each (increase of 1 submitted)..... 3,000.00
Thompson, H. M..... Cataloguer, at \$1,200..... { 1,100.00	2 clerks, at \$1,000 each..... 2,000.00	4 clerks, at \$900 each..... 3,600.00
Leonard, Mabel..... Cataloguer, at \$1,000..... { 208.33	4 clerks, at \$900 each..... 3,600.00	1 clerk..... 840.00
Warren, Mary W..... Cataloguer, at \$1,000..... { 791.67	1 messenger..... 720.00	1 clerk..... 840.00
Thompson, M. F..... Cataloguer, at \$1,000..... { 1,000.00	1 messenger or laborer..... 600.00	2 cataloguers, at \$1,200 each..... 2,400.00
Upton, K. G..... Cataloguer, at \$1,000..... { 1,000.00	1 messenger..... 480.00	3 cataloguers, at \$1,000 each..... 3,000.00
Crowther, Mary..... Clerk, at \$1,000..... { 41.67	1 charwoman..... 480.00	1 messenger..... 720.00
Parker, Fanny L..... Clerk, at \$1,000..... { 958.33		1 messenger..... 600.00
Crowther, Mary..... Clerk, at \$1,000..... { 80.56		2 messengers, messenger boys or laborers, at \$480 each (increase of one by transfer from lump fund for general expenses)..... 960.00
Rynex, M. L..... Clerk, at \$1,000..... { 166.66		1 charwoman..... 480.00
Sewall, Harriet W..... Clerk, at \$1,000..... { 752.79		
Allen, Mary E..... Clerk, at \$900..... { 100.00		
Brashears, M. L..... Clerk, at \$900..... { 412.50		
Phipps, Gertrude E..... Clerk, at \$900..... { 227.50		
Warren, Mary W..... Clerk, at \$900..... { 160.00		
Crowther, Mary..... Clerk, at \$900..... { 790.00		
Stanley, Harriet H..... Clerk, at \$900..... { 37.50		
Lacey, Mary G..... Clerk, at \$900..... { 150.00		
Sherwood, Elizabeth J..... Clerk, at \$900..... { 750.00		
		Total amount estimated (an apparent increase over 1911 of \$3,080)..... 23,000.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Library—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, library, Department of Agriculture, 1910, \$19,320—Continued.</i>	<i>Salaries, library, Department of Agriculture, 1911, \$19,920—Continued.</i>	<i>Salaries, library, Department of Agriculture, 1912, \$23,000—Continued.</i>
Olcott, Ella M. .... } Clerk, at \$900..... } \$750.00		
Sewall, Harriet W. .... } 150.00		
McBryde, Ellen D. .... } 42.00		
Olcott, Ella M. .... } 140.00		
Selecman, C. M. R. .... } Clerk, at \$840..... } 420.00		
Smith, E. E. .... } 175.00		
Swartwout, J. E. .... } 28.00		
Smith, Moses. .... } Messenger, at \$720..... } 720.00		
Fisher, Theodore. .... } 160.00		
Sheehan, Frank J. .... } Messenger, at \$480..... } 320.00		
Moze, Willena. .... } Charwoman, at \$480..... } 480.00		
Total..... 19,209.15		
Unexpended balance..... 110.85		
Total amount of above appropriation..... 19,320.00		
	Total amount of above appropriation (an increase over 1910 of \$600)..... \$19,920.00	
The above force performed the following duties:	The above force is performing the following duties:	
Administration:	Administration:	
1 librarian..... \$2,000.00	1 librarian..... \$2,000.00	
1 assistant librarian..... 1,400.00	1 assistant librarian..... 1,400.00	
3,400.00	3,400.00	
Correspondence, files, and accounts:	Correspondence, files, and accounts:	
2 clerks, at \$900 each..... 1,800.00	3 clerks, at \$900 each..... 2,700.00	
1 clerk..... 840.00		
2,640.00		
Cataloguing, indexing, translating, loan desk work, and care of periodicals:	Cataloguing, indexing, translating, loan desk work, and care of periodicals:	
2 cataloguers, at \$1,200 each..... \$2,400.00	2 cataloguers, at \$1,200 each..... \$2,400.00	
1 clerk (translator)..... 1,200.00	1 clerk (translator)..... 1,200.00	
1 clerk..... 1,200.00	1 clerk..... 1,200.00	
3 cataloguers, at \$1,000 each..... 3,000.00	3 cataloguers, at \$1,000 each..... 3,000.00	
2 clerks, at \$1,000 each..... 2,000.00	2 clerks, at \$1,000 each..... 2,000.00	
3 clerks, at \$900 each..... 2,700.00	2 clerks, at \$900 each..... 1,800.00	
	1 clerk..... 840.00	
	12,440.00	
Messengers and charwoman:	Messengers and charwoman:	
1 messenger..... 720.00	1 messenger..... \$720.00	
1 messenger..... 480.00	1 messenger..... 600.00	
1 charwoman..... 480.00	1 messenger..... 480.00	
	1 charwoman..... 480.00	
1,680.00	2,280.00	
20,220.00	20,820.00	
NOTE.—Of the above, 1 clerk, at \$900, was detailed from the office of the Secretary..... 900.00	NOTE.—Of the above, 1 clerk, at \$900, is detailed from the office of the Secretary..... 900.00	
19,320.00	19,920.00	
<i>Library, Department of Agriculture, 1910, \$16,500.</i>	<i>Library, Department of Agriculture, 1911, \$15,400.</i>	<i>Library, Department of Agriculture, 1912, \$15,500.</i>
Books..... \$7,509.73	Books..... \$8,200.00	Books..... \$8,500.00
Subscriptions to periodicals..... 3,213.54	Subscriptions to periodicals..... 3,300.00	Subscriptions to periodicals..... 3,500.00
Subscriptions to serials and works published in parts..... 1,409.61	Subscriptions to serials and works published in part..... 1,500.00	Subscriptions to serials and works published in part..... 1,500.00
Subscriptions to printed index cards..... 173.36	Subscriptions to printed index cards..... 200.00	Subscriptions to printed index cards..... 200.00
Photographs..... 337.00	Miscellaneous supplies..... 330.00	Miscellaneous supplies..... 600.00
Miscellaneous supplies..... 820.54	Shelving, furniture, and fittings..... 520.00	Shelving, furniture, and fittings..... 600.00
Shelving, furniture, and fittings..... 557.36	Traveling expenses..... 150.00	Traveling expenses..... 100.00
Traveling expenses..... 66.13	Assistance in care of periodicals..... 720.00	Assistance in care of periodicals..... 500.00
Assistance in care of periodicals..... 282.67	Messenger..... 480.00	
Messengers..... 593.50		
Charwoman..... 66.67		
Total..... 15,030.11		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 1,269.89		
Balance to be turned back in Treasury (estimated)..... 200.00		
Total of appropriation..... 16,500.00	Total of appropriation (a decrease from 1910 of \$1,100)..... 15,400.00	Total amount estimated (an increase over 1911 of \$100)..... 15,500.00
Total of all appropriations for library..... 35,820.00	Total of all appropriations for library (a decrease from 1910 of \$500)..... 35,320.00	Total amount estimated for library (an increase over 1911 of \$3,180)..... 38,500.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Library—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Library, Department of Agriculture, 1910, \$16,500—Continued.</i>	<i>Library, Department of Agriculture, 1911, \$15,400—Continued.</i>	<i>Library, Department of Agriculture, 1912, \$15,500—Continued.</i>
Total expenditures to Aug. 31, 1910..... \$34,239.26		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 1,269.89		
Balance to be turned back in Treasury (estimated)..... 310.85		
Total..... 35,820.00		
REMARKS.—About four-fifths of the library appropriation for 1910 was spent in the purchase of agricultural, scientific, and technical books and periodicals, reference books, and bibliographical material needed in connection with the work of the department. The remainder was spent in the purchase of supplies, furniture, and fittings, for traveling expenses, and for salaries.	REMARKS.—The library appropriation for 1911 is being spent in the purchase of agricultural, scientific, and technical books and periodicals, reference books, and bibliographical material needed in connection with the work of the department, in the purchase of supplies, furniture, and fittings, in the payment of the salary of a messenger, and for assistance in the care of periodicals.	REMARKS.—The library appropriation for 1912 will be spent in the purchase of agricultural, scientific, and technical books and periodicals, reference books, and bibliographical material needed in connection with the work of the department, in the purchase of supplies, furniture, and fittings, for traveling expenses, and for assistance in the care of periodicals.

## OFFICE OF THE CHIEF CLERK.

<i>Contingent expenses, Department of Agriculture, 1910, \$80,000.</i>	<i>Contingent expenses, Department of Agriculture, 1911, \$100,000.</i>	<i>Contingent expenses, Department of Agriculture, 1912, \$110,000.</i>
Lump-fund salaries outside of Washington..... \$600.00	Lump-fund salaries outside of Washington..... \$600.00	Lump-fund salaries outside of Washington..... \$600.00
Stationery..... 13,957.29	Stationery..... 13,000.00	Stationery..... 13,500.00
Miscellaneous supplies and services, equipment, material, etc..... 48,765.09	Miscellaneous supplies and services, equipment, material, etc.. 50,390.00	Miscellaneous supplies and services, equipment, material, etc. 57,900.00
Furniture..... 2,692.20	Furniture..... 3,000.00	Furniture..... 3,500.00
Fuel..... 15,794.81	Fuel..... 20,000.00	Fuel..... 20,000.00
Freight..... 148.88	Freight..... 40.00	Freight..... 50.00
Express..... 217.72	Express..... 250.00	Express..... 250.00
Telegraph..... 170.68	Telegraph..... 250.00	Telegraph..... 300.00
Telephone..... 787.80	Telephone..... 950.00	Telephone..... 900.00
Rent..... 7,994.92	Rent..... 9,020.00	Rent..... 9,500.00
Gas and electricity..... 8,824.01	Gas and electricity..... 11,000.00	Gas and electricity..... 12,000.00
Traveling expenses..... 1,775.24	Traveling expenses..... 1,500.00	Traveling expenses..... 1,500.00
Total expenditures to Aug. 31, 1910..... 101,728.64	Total..... 110,000.00	Total..... 120,000.00
Less repayments on account of unused mileage and refunds..... 11.63		
Net expenditures to Aug. 31, 1910..... 101,717.01		
Outstanding liabilities on Aug. 31, 1910 (estimated)..... 2,622.87		
Balance to be turned back into Treasury (estimated)..... 200.00		
Total amount available..... 104,539.88		
Deduct amount of repayments to credit of appropriation made through Treasury Department on account of supplies and material furnished to the different bureaus by the Chief of Supply Division and the chief engineer, the same having been originally purchased out of above-named appropriation:	Deduct estimated amount of repayments on account of supplies furnished by Chief of Supply Division..... 10,000.00	Deduct estimated amount of repayments on account of supplies furnished by Chief of Supply Division..... 10,000.00
Chief of Supply Division..... \$9,789.23		
Chief engineer..... 14,750.65		
24,539.88		
Total amount of regular appropriation..... 80,000.00	Total amount of appropriation (an increase over 1910 of \$20,000)..... 100,000.00	Total amount estimated (an apparent increase over 1911 of \$10,000)..... 110,000.00
REMARKS.—All supplies for the use of the office of the Secretary, the Assistant Secretary, the chief clerk, the file room, the Supply Division, the chief engineer, as well as all offices not coming directly under an independent division or bureau, are paid from above appropriation. During this fiscal year the mechanical shop, under the plan commenced during the fiscal year 1909, continued to furnish to the various bureaus of the department all equipment ordered which could be constructed by the mechanics engaged, charging the bureaus with the cost of the materials only, such accounts being settled through the Treasury Department in the amount of \$14,750.65. In addition, the Chief of the Supply Division furnished stationery supplies to the various bureaus in the amount of \$9,789.23, which accounts were likewise settled through the Treasury Department. Under this plan the bureaus are enabled to obtain stationery supplies much quicker than by ordering from the dealers, and consequently the plan greatly reduces the number of orders given.	REMARKS.—There is an apparent increase in the above appropriation of \$20,000, but the entire amount was transferred from the lump-fund appropriations of the various bureaus, to offset the charges formerly made against those bureaus by the chief engineer for materials used in the mechanical shop, the plan being to have all repair work done by the force in the mechanical shop without expense to the bureaus.	REMARKS.—There is an increase in the above appropriation of \$10,000. It is made necessary by the additional demands for repairs to buildings owned by the Government and for additional shopwork. Since the centralization of all the mechanical work in the mechanical shop building, the demands from the various bureaus for such work have greatly increased, and as it results in economy to the Government to have the work done by the mechanical shop rather than to have it done under private contract it is believed that the increase asked should be allowed.
Included in the above classification, but not specifically mentioned, the following expenses were incurred during the year: Cleaning carpets, \$91.07; fire-alarm boxes, \$50; forage, \$2,045.85; ice, \$2,170.10; washing towels, \$617.99; postage, \$3,800; conduit connecting some of the buildings with the engine-room, enabling heat to be furnished from one central plant, \$794; also expenses for press-clipping service, repairs to buildings, etc.		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## OFFICE OF EXPERIMENT STATIONS.

Detailed expenditures for the fiscal year ended June 30, 1910.			Appropriations for the current fiscal year ending June 30, 1911.			Estimated expenditures for the fiscal year ending June 30, 1912.		
Salaries, Office of Experiment Stations, 1910, \$39,260.			Salaries, Office of Experiment Stations, 1911, \$46,180.			Salaries, Office of Experiment Stations, 1912, \$56,500.		
True, A. C.	Director, at \$4,000.	\$4,000.00	1 director		\$4,000.00	1 director (increase of \$500 submitted)		\$4,500.00
Johnston, C. E.	Chief clerk, at \$1,800.	1,800.00	1 chief clerk		1,800.00	1 chief clerk (increase of \$200 submitted)		2,000.00
Henry, William	Clerk and proof reader, at \$1,600.	1,600.00	1 draftsman		1,800.00	1 computer (by transfer from lump fund for irrigation)		2,000.00
Bartholow, F. A.	Clerk, class 2	1,392.22	1 clerk and proof reader		1,600.00	1 draftsman		1,800.00
Harlow, S. A.	Clerk, class 2	1,400.00	1 editorial clerk		1,400.00	1 clerk and proof reader (increase of \$200 submitted)		1,800.00
Ryder, M. E.	Clerk, class 2	1,400.00	1 editorial clerk		1,200.00	1 editorial clerk		1,400.00
Sommers, S. L.	Clerk, class 2	1,400.00	5 clerks, class 2		7,000.00	1 editorial clerk		1,200.00
Spethmann, Marie T.	Clerk, class 2	1,400.00	6 clerks, class 1		7,200.00	1 draftsman (by transfer from lump fund for drainage)		1,200.00
Agnew, M. A.	Clerk, class 1	40.00	5 clerks, at \$1,000 each		5,000.00	5 clerks, class 2		7,000.00
Colbath, M. F.	Clerk, class 1	1,160.00	3 clerks, at \$900 each		2,700.00	7 clerks, class 1 (increase of 1 submitted by transfer from lump fund for irrigation)		8,400.00
Murphy, Daisy K.	Clerk, class 1	1,200.00	6 clerks, at \$840 each		5,040.00	6 clerks, at \$1,000 each (increase of 1 by transfer from lump fund for drainage)		6,000.00
Nau, K. A.	Clerk, class 1	1,200.00	1 clerk or messenger		840.00	4 clerks, at \$900 each (increase of 1 by transfer from lump fund for general expenses)		3,600.00
Sweetnam, M. V.	Clerk, class 1	1,200.00	3 clerks or messengers, at \$600 each		1,800.00	9 clerks or messengers, at \$840 each (increase of 3, 1 by change of title, and 2 by transfer from lump fund for drainage)		7,560.00
Vance, Miriam C.	Clerk, class 1	1,200.00	2 messengers or laborers, at \$480 each		960.00	1 clerk or messenger		720.00
Agnew, M. A.	Clerk, at \$1,000	966.66	1 copyist or laborer		720.00	3 clerks, messengers, or laborers, at \$600 each (change of title submitted)		1,800.00
Alexander, Emma C.	Clerk, at \$1,000	33.34	4 laborers or charwomen, at \$480 each		1,920.00	4 messengers, messenger boys, or laborers, at \$480 each (change of title and increase of 2 by transfer from lump funds for drainage and nutrition)		1,920.00
Dalish, W. M.	Clerk, at \$1,000	1,000.00	2 laborers or charwomen, at \$240 each		480.00	1 copyist or laborer		720.00
Emerson, Edith O.	Clerk, at \$1,000	1,000.00				5 laborers or charwomen, at \$480 each (increase of 1 by transfer from lump fund for drainage)		2,400.00
Maddux, S. K.	Clerk, at \$1,000	1,000.00				2 laborers or charwomen, at \$240 each		480.00
Resch, A.	Clerk, at \$1,000	1,000.00						
Alexander, Emma C.	Clerk, at \$900	765.00						
Figg, Beulah	Clerk, at \$900	30.00						
Todd, Frances W.	Clerk, at \$900	900.00						
Garland, M. O.	Clerk, at \$900	375.00						
Hanna, Jane	Clerk, at \$900	525.00						
Henderson, Alice K.	Clerk, at \$840	714.00						
Alexander, Emma C.	Clerk, at \$840	126.00						
Kendall, Shirley E.	Clerk, at \$840	506.33						
Barr, E. Aileen	Clerk, at \$840	333.67						
Holland, Mary E.	Clerk, at \$840	793.33						
Crain, A. C.	Clerk, at \$840	350.00						
Henderson, Alice K.	Clerk, at \$840	490.00						
Nelson, H. A.	Clerk, at \$840	812.00						
Todd, Frances W.	Clerk, at \$840	28.00						
Wallace, Amelia D.	Clerk or messenger, at \$840	840.00						
Eidsness, L. M.	Clerk or messenger, at \$840	360.00						
Barnhartt, Eva L.	Messenger, at \$720	60.00						
Lehmann, Wm. G.	Messenger, at \$720	300.00						
Nelson, H. A.	Messenger, at \$720	203.33						
Avery, Sarah L.	Clerk or messenger, at \$600	188.33						
Hanford, J. G.	Clerk or messenger, at \$600	108.33						
Murphy, Anna C.	Messenger, at \$600	475.00						
Dalrymple, Jas. M.	Messenger, at \$600	123.33						
Mansuy, J. S.	Messenger, at \$600	550.00						
Lehmann, Wm. G.	Messenger, at \$600	50.00						
Whitlock, Harry T.	Messenger, at \$600	100.00						
Dalrymple, Jas. M.	Messenger, at \$600	100.00						
Hanford, J. G.	Messenger, at \$480	100.00						
Thomas, Millard L.	Messenger, at \$480	180.00						
Wilson, Harry R.	Messenger, at \$480	720.00						
Webster, Nimia	Copyist, at \$720	480.00						
Garvey, Mary C.	Charwoman, at \$480	480.00						
Martin, Mary E.	Charwoman, at \$480	480.00						
Moriarty, Mary A.	Charwoman, at \$480	480.00						
Noone, Sarah A.	Charwoman, at \$480	480.00						
Behm, Mary C.	Charwoman, at \$240	240.00						
Jordan, Mary	Charwoman, at \$240	70.00						
Newman, Mary	Charwoman, at \$240	170.00						
Total		39,103.87						
Unexpended balance		156.13						
Total of above appropriation		39,260.00						

Total amount of above appropriation (an increase over 1910 of \$6,920) . . . .	46,180.00
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Total amount estimated (an apparent increase over 1911 of \$10,320) . .	56,500.00
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NOTE.—There is an increase in the above appropriation of \$10,320. Of this sum \$9,420 covers the transfer of 10 employees from lump funds for general expenses, nutrition, irrigation, and drainage, which funds have been reduced accordingly, and \$900 is for promotions. The increase in salary of the chief of bureau is well deserved and will make his salary more nearly agree with the salaries of other chiefs in the departmental service. The changes in detail are as follows:

Transfers from lump funds:	
1 clerk from general expenses . . . . .	900.00
1 computer from irrigation . . . . .	2,000.00
1 clerk, class 1, from irrigation . . . . .	1,200.00
1 draftsman from drainage . . . . .	1,200.00
1 clerk from drainage . . . . .	1,000.00
2 clerks or messengers, at \$840 each, from drainage . . . . .	1,680.00
2 messengers, messenger boys, or laborers, at \$480 each, from drainage and nutrition . . . . .	960.00
1 laborer or charwoman from drainage . . . . .	480.00
Promotions:	
1 chief of bureau . . . . .	500.00
1 chief clerk . . . . .	200.00
1 clerk and proof reader . . . . .	200.00
	10,320.00

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## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Experiment Stations, 1910, \$39,260—Continued.</i>	<i>Salaries, Office of Experiment Stations, 1911, \$46,180—Continued.</i>	<i>Salaries, Office of Experiment Stations, 1912, \$56,500—Continued.</i>
The above force performed the following duties: General administration of the office in its relations with agricultural experiment stations, agricultural colleges and schools, farmers' institutes, and investigations on nutrition, irrigation, and drainage; general and cost accounting, and care of office rooms:	The above force is performing the following duties: General administration of the office in its relations with agricultural experiment stations, agricultural colleges and schools, farmers' institutes, and investigations on nutrition, irrigation, and drainage; general and cost accounting and care of office rooms:	The above force will perform the following duties: General administration of the office in its relations with agricultural experiment stations, agricultural colleges and schools, farmers' institutes, and investigations on nutrition, irrigation, and drainage; general and cost accounting, and care of office rooms:
Director..... \$4,000.00	Director..... \$4,000.00	Director..... \$4,500.00
Chief clerk..... 1,800.00	Chief clerk..... 1,800.00	Chief clerk..... 2,000.00
1 clerk, class 2..... 1,400.00	1 draftsman..... 1,800.00	1 computer..... 2,000.00
1 clerk..... 1,000.00	1 clerk, class 2..... 1,400.00	1 clerk, class 2..... 1,400.00
2 clerks, \$900 each..... 1,800.00	1 clerk, class 1..... 1,200.00	2 clerks, class 1..... 2,400.00
2 clerks, \$840 each..... 1,680.00	3 clerks, \$1,000 each..... 3,000.00	3 clerks, \$1,000 each..... 3,000.00
One messenger or caretaker..... 720.00	2 clerks, \$840 each..... 1,680.00	3 clerks, \$840 each..... 2,520.00
1 clerk or messenger..... 600.00	1 clerk or messenger..... 720.00	1 clerk or messenger..... 720.00
Four laborers or charwomen, at \$180 each..... 1,920.00	1 clerk or messenger..... 600.00	4 messengers, messenger boys, or laborers, \$480 each..... 1,920.00
2 laborers or charwomen, at \$240 each..... 480.00	4 laborers or charwomen, at \$480 each..... 1,920.00	5 laborers or charwomen, \$480 each..... 2,400.00
	2 laborers or charwomen, at \$240 each..... 480.00	2 laborers or charwomen, \$240 each..... 480.00
15,400.00	18,600.00	23,940.00
Preparation of Experiment Station Record, annual report to Congress, bulletins, circulars, etc.:	Preparation of Experiment Station Record, annual report to Congress, bulletins, circulars, etc.:	Preparation of Experiment Station Record, annual report to Congress, bulletins, circulars, etc.:
Clerk and proof reader..... 1,600.00	Clerk and proof reader..... 1,600.00	Clerk and proof reader..... 1,800.00
2 clerks, class 2..... 2,792.22	1 editorial clerk..... 1,400.00	Editorial clerk..... 1,400.00
2 clerks, class 1..... 2,400.00	1 editorial clerk..... 1,200.00	Editorial clerk..... 1,200.00
2 clerks, \$1,000 each..... 2,000.00	2 clerks, class 2..... 2,800.00	Two clerks, class 2..... 2,800.00
1 clerk or messenger..... 499.99	2 clerks, class 1..... 2,400.00	3 clerks, class 1..... 3,600.00
1 messenger or laborer..... 480.00	2 clerks, \$1,000 each..... 2,000.00	3 clerks, \$1,000 each..... 2,000.00
	2 clerks, \$900 each..... 1,800.00	3 clerks, \$900 each..... 2,700.00
	1 clerk or messenger..... 600.00	1 clerk, messenger, or laborer..... 600.00
	1 messenger or laborer..... 480.00	
9,772.21	14,280.00	16,100.00
Correspondence, files, distribution of publications, card index of station publications, care of property, movement of field instruments, and miscellaneous clerical work, including assignment and care of civil-service papers sent to the department for marking:	Correspondence, files, distribution of publications, card index of station publications, care of property, movement of field instruments, and miscellaneous clerical work, including assignment and care of civil-service papers sent to the department for marking:	Correspondence, files, distribution of publications, card index of station publications, care of property, movement of field instruments, and miscellaneous clerical work, including assignment and care of civil-service papers sent to the department for marking:
2 clerks, class 2..... 2,800.00	2 clerks, class 2..... 2,800.00	1 draftsman..... 1,800.00
3 clerks, class 1..... 3,600.00	3 clerks, class 1..... 3,600.00	2 clerks, class 2..... 2,800.00
2 clerks, \$1,000 each..... 2,000.00	1 clerk..... 900.00	1 draftsman..... 1,200.00
1 clerk..... 900.00	4 clerks, \$840 each..... 3,360.00	1 clerk..... 1,000.00
3 clerks, \$840 each..... 2,473.33	1 clerk or messenger..... 840.00	1 clerk..... 900.00
1 clerk or messenger..... 840.00	1 clerk or messenger..... 600.00	6 clerks, \$840 each..... 5,040.00
1 clerk or messenger..... 598.33	1 messenger or laborer..... 480.00	1 clerk, messenger, or laborer..... 600.00
1 copyist or laborer..... 720.00	1 copyist or laborer..... 720.00	1 copyist or laborer..... 720.00
13,931.66	13,300.00	16,460.00
39,103.87	46,180.00	56,500.00
<i>Agricultural experiment stations, 1910, \$143,800.</i>	<i>Agricultural experiment stations, 1911, \$142,400.</i>	<i>Agricultural experiment stations, 1912, \$182,500.</i>
General expenses (\$34,800):	General expenses (\$33,400):	General expenses (\$37,500):
Salaries—	Salaries—	Salaries—
In Washington..... \$28,477.02	In Washington..... \$28,346.67	In Washington..... \$30,000.00
Out of Washington..... 300.00	Out of Washington..... 300.00	Out of Washington..... 300.00
Stationery..... 594.14	Stationery..... 500.00	Stationery..... 500.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,750.47	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,053.33	Miscellaneous supplies and services, equipment, books, machinery, etc..... 2,000.00
Furniture..... 535.26	Furniture..... 500.00	Furniture..... 500.00
Freight..... 107.85	Freight..... 30.00	Freight..... 40.00
Express..... 20.63	Express..... 50.00	Express..... 100.00
Telegraph..... 17.37	Telegraph..... 20.00	Telegraph..... 35.00
Telephone..... 43.51	Telephone..... 20.00	Telephone..... 25.00
Rent..... 522.58	Apparatus, instruments, and laboratory material..... 80.00	Apparatus, instruments, and laboratory materials..... 200.00
Apparatus, instruments, and laboratory material..... 5.51	Travel and station and field expenses..... 2,500.00	Travel and station and field expenses..... 3,800.00
Travel and station and field expenses..... 1,936.23		
Total expenditures to Aug. 31, 1910..... 34,310.57	Total amount for general expenses (an apparent decrease of \$1,400 from 1910)..... 33,400.00	Total amount for general expenses (an apparent increase from 1911 of \$4,100)..... 37,500.00
Outstanding liabilities (estimated)..... 109.73		
Balance to be turned back in Treasury (estimated)..... 379.70		
34,800.00		

NOTE.—Apparent increase \$4,100, but adding the salary of place transferred to the statutory roll, amounting to \$900, the total increase is \$5,000.

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p.1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>Agricultural experiment stations, 1910, \$143,800—Continued.</i></p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary to carry out the provisions of section 3 of an act of Mar. 2, 1887, and sections 2, 4, and 5, of an act approved Mar. 16, 1906, and covered the following work:</p> <p>Supervision of the work and expenditures of 56 agricultural experiment stations in 48 States and Territories, and Alaska, Hawaii, Porto Rico, and island of Guam, and promotion of their general interests. The preparation of 88 publications based on the work of over 1,000 agricultural experiment stations and kindred institutions throughout the world, and 800 cards of the index of experiment station literature. Preparation of 7,048 summaries of the reports of agricultural investigations made by the agricultural experiment stations and kindred institutions in the United States and 50 other countries, in order to give prompt information regarding such investigations to the workers in similar lines in this department and the agricultural experiment stations and to teachers and students in the agricultural colleges and schools. This information is published monthly in the Experiment Station Record. This journal also contains articles suggesting lines of work for the stations and advice regarding their work and management as required.</p>	<p><i>Agricultural experiment stations, 1911, \$142,400—Continued.</i></p> <p>NOTE.—The above estimated expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are necessary to carry out the provisions of section 3 of an act of Mar. 2, 1887, and sections 2, 4, and 5 of an act approved Mar. 16, 1906, and will include the following work:</p> <p>Supervision of the work and expenditures of 56 agricultural experiment stations in 48 States and Territories, and Alaska, Hawaii, Porto Rico, and Guam, and promotion of their general interests. The preparation of publications based on the work of over 1,000 agricultural experiment stations and kindred institutions throughout the world, and cards of the index of experiment station literature. Preparation of summaries of the reports of agricultural investigations made by the agricultural experiment stations and kindred institutions in the United States and other countries, in order to give prompt information regarding such investigations to the workers in similar lines in this department and the agricultural experiment stations and to teachers and students in the agricultural colleges and schools. This information is published monthly in the Experiment Station Record. This journal will also contain articles and advice regarding their work and management as required.</p>	<p><i>Agricultural experiment stations, 1912, \$182,500—Continued.</i></p> <p>NOTE.—The above estimated expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are necessary to carry out the provisions of section 3 of the act of Mar. 2, 1887, and sections 2, 4, and 5 of an act approved Mar. 16, 1906, and will include the following work:</p> <p>Supervision of the work and expenditures of 56 agricultural experiment stations in 48 States and Territories, and Alaska, Hawaii, Porto Rico, and the island of Guam, and promotion of their general interests. The preparation of publications based on the work of over 1,000 agricultural experiment stations and kindred institutions throughout the world, and cards of the index of experiment station literature. Preparation of summaries of the reports of agricultural investigations made by the agricultural experiment stations and kindred institutions in the United States and other countries, in order to give prompt information regarding such investigations to the workers in similar lines in this department and the agricultural experiment stations and to teachers and students in the agricultural colleges and schools. This information is published monthly in the Experiment Station Record. This journal will also contain articles suggesting lines of work for the stations and advice regarding their work and management as required.</p> <p>Scientific investigations, preparation and publication of reports of (\$20,000):</p> <p>To enable the Secretary of Agriculture, in cooperation with the Association of American Agricultural Colleges and Experiment Stations, to prepare, publish, and distribute original technical reports of the scientific investigations made by the agricultural experiment stations established in accordance with the aforementioned act approved Mar. 2, 1887, and the acts supplementary thereto, including rent and the employment of clerks, assistants, and other persons in the city of Washington and elsewhere, printing, illustrations, and all other necessary expenses, provided that said reports may be issued in editions not exceeding 2,500 copies and distributed without charge to libraries, colleges, scientific institutions, and persons actually engaged in teaching or in scientific investigations relating to agriculture.....</p> <p>\$20,000.00</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Agricultural experiment stations, 1910, \$143,800—Continued.</i>	<i>Agricultural experiment stations, 1911, \$142,400—Continued.</i>	<i>Agricultural experiment stations, 1912, \$182,500—Continued.</i>
<b>Alaska Experiment Station (\$28,000):</b> Maintenance of a central experiment station and 4 branch stations to investigate the agricultural and horticultural resources of Alaska, development of animal industry, dairying, etc., and introduction of live stock for experimental purposes.	<b>Alaska Experiment Station (\$28,000):</b> Maintenance of a central experiment station and 4 branch stations to investigate the agricultural and horticultural resources of Alaska, development of animal industry, dairying, etc., and introduction of live stock for experimental purposes.	<b>Alaska Experiment Station (\$30,000):</b> Maintenance of a central experiment station and 4 branch stations to investigate the agricultural and horticultural resources of Alaska, development of animal industry, dairying, etc., and introduction of live stock for experimental purposes.
Salaries..... \$11,053.25	Salaries..... \$13,000.00	Salaries..... \$13,000.00
Labor..... 7,104.94	Labor..... 6,500.00	Labor..... 7,500.00
Travel..... 501.84	Travel..... 1,000.00	Travel..... 1,000.00
Freight, express, etc..... 789.05	Freight, express, etc..... 1,000.00	Freight, express, etc..... 1,000.00
Supplies, etc..... 8,515.92	Supplies, etc..... 6,500.00	Supplies, etc..... 7,500.00
Total..... 27,995.00		
Balance to be turned back in Treasury (estimated)..... 5.00		
28,000.00	Total..... 28,000.00	Total (an increase over 1911 of \$2,000)..... 30,000.00
<b>Hawaii Experiment Station (\$28,000):</b> Maintenance of an experiment station at which studies are made on diversified agriculture with reference to the peculiar needs of the country, and scientific investigations in agronomy, chemistry, entomology, horticulture, etc.	<b>Hawaii Experiment Station (\$28,000):</b> Maintenance of an experiment station at which studies are made on diversified agriculture with reference to the peculiar needs of the country, and scientific investigations in agronomy, chemistry, entomology, horticulture, etc.	<b>Hawaii Experiment Station (\$30,000):</b> Maintenance of an experiment station at which studies are made on diversified agriculture with reference to the peculiar needs of the country, and scientific investigations in agronomy, chemistry, entomology, horticulture, etc.
Salaries..... 16,797.45	Salaries..... 16,000.00	Salaries..... 16,000.00
Labor..... 5,930.53	Labor..... 6,000.00	Labor..... 7,000.00
Travel..... 214.70	Travel..... 500.00	Travel..... 500.00
Freight, express, etc..... 62.98	Freight, express, etc..... 500.00	Freight, express, etc..... 500.00
Supplies, etc..... 4,969.34	Supplies, etc..... 5,000.00	Supplies, etc..... 6,000.00
Total..... 27,975.00		
Balance, to be turned back in Treasury (estimated)..... 25.00		
28,000.00	Total..... 28,000.00	Total (an increase over 1911 of \$2,000)..... 30,000.00
<b>Porto Rico Experiment Station (\$28,000):</b> Maintenance of a station to carry on experiments in agronomy, entomology, horticulture, coffee culture, and scientific investigations along various lines of agriculture.	<b>Porto Rico Experiment Station (\$28,000):</b> Maintenance of a station to carry on experiments in agronomy, entomology, horticulture, coffee culture, and scientific investigations along various lines of agriculture.	<b>Porto Rico Experiment Station (\$30,000):</b> Maintenance of a station to carry on experiments in agronomy, entomology, horticulture, coffee culture, and scientific investigations along various lines of agriculture.
Salaries..... 15,512.82	Salaries..... 16,000.00	Salaries..... 17,000.00
Labor..... 6,008.25	Labor..... 6,000.00	Labor..... 6,000.00
Travel..... 1,155.29	Travel..... 750.00	Travel..... 1,000.00
Freight, express, etc..... 703.56	Freight, express, etc..... 500.00	Freight, express, etc..... 500.00
Supplies, etc..... 4,620.08	Supplies, etc..... 4,750.00	Supplies, etc..... 5,500.00
Total..... 28,000.00	Total..... 28,000.00	Total (an increase over 1911 of \$2,000)..... 30,000.00
<b>Guam Experiment Station (\$15,000):</b> To investigate and report to Congress on the agricultural resources and capabilities of Guam with special reference to the location of an agricultural experiment station and the determination of the character and extent of agricultural experiments immediately demanded by the agriculture of the island.	<b>Guam Experiment Station (\$15,000):</b> To equip and maintain an agricultural experiment station on the Island of Guam for the purpose of carrying on experiments in agronomy, horticulture, animal husbandry, etc.	<b>Guam Experiment Station (\$15,000):</b> Equipment and maintenance of a station to carry on experiments in agronomy, horticulture, animal husbandry, etc.
Salaries..... 2,875.00	Salaries..... 4,000.00	Salaries..... 5,500.00
Labor..... 4,876.11	Labor..... 3,500.00	Labor..... 3,500.00
Travel..... 258.32	Travel..... 500.00	Travel..... 500.00
Freight, express, etc..... 98.73	Freight, express, etc..... 500.00	Freight, express, etc..... 500.00
Supplies, implements, machinery, etc..... 6,033.47	Supplies, implements, etc..... 4,000.00	Supplies, implements, etc..... 5,000.00
Total..... 14,141.63	Live stock..... 2,500.00	
Balance, to be turned back in Treasury (estimated)..... 858.37		
15,000.00	Total..... 15,000.00	Total..... 15,000.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Agricultural experiment stations, 1910—\$143,800—Continued.</i>	<i>Agricultural experiment stations, 1911, \$142,400—Continued.</i>	<i>Agricultural experiment stations, 1912, \$182,500—Continued.</i>
<b>Farmers' Institutes (\$10,000):</b> Salaries, in Washington..... \$7,148.17 Stationery..... 104.58 Miscellaneous supplies and services, equipment, books, machinery, etc..... 290.16 Furniture..... 523.88 Express..... 12.05 Telegraph..... 3.86 Telephone..... .10 Apparatus, instruments, and laboratory material..... 97.55 Travel and station and field expenses..... 1,480.41  Total expenditures to Aug. 31, 1910..... 9,660.76 Outstanding liabilities (estimated)..... 153.50  Balance to be turned back in Treasury (estimated).... 185.74  10,000.00	<b>Farmers' Institutes (\$10,000):</b> Salaries, in Washington..... \$7,000.00 Stationery..... 100.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 350.00 Furniture..... 500.00 Express..... 20.00 Telegraph..... 10.00 Apparatus, instruments, and laboratory material..... 420.00 Travel and station and field expenses..... 1,600.00  Total..... 10,000.00  <b>Total amount of above appropriation (less \$720,000 for state experiment colleges disbursed by Treasury) (a decrease from 1910 of \$1,400)...</b> 142,400.00	<b>Farmers' Institutes (\$20,000):</b> Salaries, in Washington..... \$15,200.00 Stationery..... 200.00 Miscellaneous supplies and services, equipment, books, machinery, etc..... 500.00 Furniture..... 500.00 Express..... 50.00 Telegraph..... 20.00 Apparatus, instruments, and laboratory material..... 370.00 Travel and station and field expenses..... 3,160.00  Total (an increase over 1911 of \$10,000)..... 20,000.00  <b>Total amount estimated (less \$720,000 for state experiment colleges, and \$720,000 for Adams Act, to be disbursed by Treasury) (an apparent increase over 1911 of \$10,100).....</b> 182,500.00
<p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1910, the work including investigations and reports upon the organization and progress of farmers' institutes and agricultural schools in the several States and Territories and similar organizations in foreign countries and suggestions as to plans and methods for making such organizations more effective for the dissemination of the results of the work of the Department of Agriculture and the agricultural experiment stations and of improved methods of agricultural practice.</p>	<p>NOTE.—The above proposed expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are estimated as being necessary to enable the Secretary of Agriculture to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1911, the work including the investigations and reports upon the organization and progress of farmers' institutes and agricultural schools in the several States and Territories and similar organizations in foreign countries and suggestions as to plans and methods for making such organizations more effective for the dissemination of the results of the work of the Department of Agriculture and the agricultural experiment stations and of improved methods of agricultural practice.</p>	<p>NOTE.—The above estimated expenditures classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary to enable the Secretary of Agriculture to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1912, the work including investigations and reports upon the organization and progress of farmers' institutes and agricultural schools and departments of agricultural extension in the several States and Territories and similar organizations in foreign countries and suggestions as to plans and methods of making such organizations more effective for the dissemination of the results of the work of the Department of Agriculture and the agricultural experiment stations and of improved methods of agricultural practice.</p>
<b>Nutrition investigations, 1910 (\$10,000):</b> Salaries, in Washington..... 5,945.84 Stationery..... 11.01 Miscellaneous supplies and services, equipment, books, machinery, etc..... 402.32 Furniture..... 412.48 Freight..... 2.55 Express..... 18.19 Telegraph..... 3.87 Telephone..... 6.00 Apparatus, instruments, and laboratory material..... 1,310.74 Travel and station and field expenses..... 203.84  Total expenditures to Aug. 31, 1910..... 8,316.84 Outstanding liabilities (estimated)..... 1,564.13 Balance to be turned back in Treasury (estimated).... 119.13  <b>Total amount of above appropriation.....</b> 10,000.00	<b>Nutrition investigations, 1911 (\$10,000):</b> Salaries, in Washington..... 8,000.00 Miscellaneous supplies, and services, furniture, equipment, books, machinery, etc..... 500.00 Freight..... 15.00 Express..... 30.00 Telegraph..... 5.00 Telephone..... 6.00 Apparatus, instruments, and laboratory material..... 1,144.00 Travel and station and field expenses..... 300.00  <b>Total amount of above appropriation.....</b> 10,000.00	<b>Nutrition investigations, 1912 (\$15,000):</b> Salaries, in Washington..... 9,000.00 Miscellaneous supplies, and services, furniture, equipment, books, machinery, etc..... 1,500.00 Freight..... 15.00 Express..... 30.00 Telegraph..... 5.00 Telephone..... 6.00 Apparatus, instruments, and laboratory material..... 4,144.00 Travel and station and field expenses..... 300.00  <b>Total amount estimated (an apparent increase over 1911 of \$5,000)....</b> 15,000.00
<p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1910, providing for setting up and completing apparatus, the property of the Government, and used in the nutrition investigations, and the preparation of publication of the results already obtained.</p>	<p>NOTE.—The above proposed expenditures, classified in accordance with the suggestion of the congressional committee on expenditures, are estimated as being necessary to enable the Secretary of Agriculture to investigate and report on the nutritive value of agricultural products used for human foods, with special suggestions of plans and methods for the more effective utilization of such products and the dissemination of useful information on this subject, including</p>	<p>NOTE.—The above estimated expenditures, classified in accordance with the suggestion of the congressional committee on expenditures, have been submitted as necessary to enable the Secretary of Agriculture to extend the investigation of and reports on the nutritive value of agricultural products used for human food, with special suggestions of plans and methods for the more effective utilization of such products and the dissemination of</p>

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Agricultural experiment stations, 1910, \$143,800—Continued.</i>	<i>Agricultural experiment stations, 1911, \$142,400—Continued.</i>	<i>Agricultural experiment stations, 1912, \$182,500—Continued.</i>
<i>Irrigation investigations, 1910, \$75,000.</i>	<i>Irrigation investigations, 1911, \$70,380.</i>	<i>Irrigation investigations, 1912, \$80,000.</i>
Salaries:	Salaries:	Salaries:
In Washington.....	In Washington.....	In Washington.....
Out of Washington.....	Out of Washington.....	Out of Washington.....
Stationery.....	Stationery.....	Stationery.....
Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....	Miscellaneous supplies and services, equipment, books, machinery, etc.....
Furniture.....	Furniture.....	Furniture.....
Freight.....	Freight.....	Freight.....
Express.....	Express.....	Express.....
Telegraph.....	Telegraph.....	Telegraph.....
Telephone.....	Telephone.....	Telephone.....
Rent.....	Rent.....	Rent.....
Apparatus, instruments, and laboratory material.....	Apparatus, instruments, and laboratory materials.....	Apparatus, instruments, and laboratory material.....
Travel and station and field expenses.....	Travel and station and field expenses.....	Travel and station and field expenses.....
Total expenditures to Aug. 31, 1910.....		
Total amount of above appropriation.....		
Total expenditures under above groups.....		
Unexpended balance Aug. 31, 1910.....		
Repayments to credit of appropriation.....		
Net unexpended balance.....		
Outstanding liabilities (estimated).....		
Balance to be turned back in Treasury (estimated).....		
Total amount of above appropriation.....		
	Total amount of above appropriation (a decrease from 1910 of \$4,620).....	Total amount estimated (an apparent increase from 1911 of \$9,620)....
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1910, enabling the Secretary of Agriculture to investigate and report upon the laws affecting irrigation, etc., the expenditures by States for this work being as follows:	NOTE.—The above proposed expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, will be necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1911, enabling the Secretary of Agriculture to investigate and report upon the laws of the States and Territories as affecting irrigation and the rights of riparian proprietors and institutions relating to irrigation, and upon the use of irrigation waters, at home and abroad, with especial suggestions of the best methods for the utilization of irrigation waters in agriculture, and upon the use of different kinds of power and appliances for irrigation, and for the preparation and illustration of reports and bulletins on irrigation, etc. The proposed expenditures by States for this work are as follows:	NOTE.—The above estimates, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary to enable the Secretary of Agriculture to complete and report upon investigations now in progress and for the continuation and extension of the work to different localities, with special reference to furnishing advice and assistance to settlers in new irrigation regions. The proposed expenditures by States for this work are as follows:
Arid States (in general).....	Arid States (in general).....	Arid States (in general).....
Arizona.....	Arizona.....	Arizona.....
California.....	California.....	California.....
Colorado.....	Colorado.....	Colorado.....
Humid States (in general).....	Humid States (in general)....	Humid States (in general)...
Idaho.....	Idaho.....	Idaho.....
Iowa.....	Iowa (included under humid States).....	Iowa (included under humid States).....
Kansas.....	Kansas.....	Kansas and Oklahoma.....
Louisiana, Texas, and Arkansas (rice).....	Louisiana, Texas, and Arkansas (rice).....	Louisiana, Texas, and Arkansas (rice).....
Minnesota.....	Minnesota (included under humid States).....	Minnesota (included under humid States).....
Montana.....	Montana.....	Montana.....
Nevada.....		
New Jersey.....		
New Mexico.....		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Irrigation investigations, 1910, \$75,000—Continued.</i>	<i>Irrigation investigations, 1911, \$70,380—Cont'd.</i>	<i>Irrigation investigations, 1912, \$80,000—Cont'd.</i>
North Dakota..... \$150.00	Nebraska..... \$1,250.00	Nebraska..... \$1,250.00
Oregon..... 2,926.19	Nevada..... 500.00	Nevada..... 500.00
Texas..... 2,710.83	New Jersey..... 200.00	New Jersey..... 200.00
Utah..... 2,364.56	New Mexico..... 1,500.00	New Mexico..... 1,500.00
Washington..... 3,133.44	North Dakota..... 250.00	North Dakota..... 250.00
Wyoming..... 8,788.56	Oregon..... 1,500.00	Oregon..... 1,500.00
Advisory and consulting irrigation field work (in-	South Dakota..... 900.00	South Dakota..... 900.00
cluded in arid States).....	Texas..... 3,500.00	Texas..... 3,500.00
	Utah..... 2,350.00	Utah..... 2,350.00
	Washington..... 3,500.00	Washington..... 3,500.00
	Wyoming..... 8,700.00	Wyoming..... 8,700.00
	Advisory and consulting irri-	Advisory and consulting irri-
	gation field work (as re-	gation field work (as re-
	quired).....	quired).....
	52,700.00	56,400.00
56,959.84		
PROJECTS.	PROJECTS.	PROJECTS.
The expenditures in connection with the investiga-	The expenditures in connection	The proposed expenditures
tions have been distributed largely among definite	with the investigations	in connection with the inves-
projects, the object and estimated cost of each being	will be distributed largely	tigation will be distributed
stated below:	among definite projects, the	largely among projects, the
	object and estimated cost of	object and the estimated cost
	each being as stated below:	of each being as stated below:
<i>On the use of water in irrigation and technical investigations.</i>	<i>On the use of water in irrigation and</i>	<i>On the use of water in irrigation</i>
	<i>technical investigations.</i>	<i>and technical investigations.</i>
The technical investigations included studies of the	The technical investigations	The technical investiga-
losses of irrigation water and the means of checking and	will include studies to deter-	tions will include studies to
preventing them: Adaptation of methods of applying	mine the extent of losses of	determine the extent of losses
water to different types of soil and different crops, car-	water under present irrigation	of water under present irri-
ried on chiefly in cooperation with the State experi-	practice and of the means	gation practice and of the
ment stations; practical tests of engines and windmills	which can be adopted for	means which can be adopted
used in pumping water for irrigation; investigations of	checking these losses, both	for checking these losses, both
the use of water in irrigation, including collection of	in conveying water to the place	in conveying water to the
information regarding existing practice and the prepa-	of use and in its application	place of use and in its applica-
ration of bulletins describing practical methods.	to the soil; experiments with	tion to the soil; experiments
	devices for measuring water	with devices for measuring
	to consumers; experiments to	water to consumers; experi-
	determine what methods of ap-	ments to determine what
	plying water to fields secure	methods of applying water to
	the best results; the most ad-	fields secure the best results;
	vantageous quantities to ap-	the most advantageous quan-
	ply at single irrigation and	tities to apply at a single irri-
	during the growth of a crop	gation and during the growth
	with different types of soil and	of a crop with different types
	with different crops; mechan-	of soil and with different
	ical tests of engines and wind-	crops; mechanical tests of en-
	mills used for pumping water	gines and windmills used for
	for irrigation, for the purpose	pumping water for irrigation,
	of suggesting improvements in	for the purpose of suggesting
	their construction. Investi-	improvements in their con-
	gations of the use of water in	struction. Investigations of
	irrigation include the collec-	the use of water in irrigation
	tion of information regarding	include the collection of in-
	existing practice and the prepa-	formation regarding existing
	ration of practical bulletins	practice and the preparation
	describing the best methods	of practical bulletins describ-
	with a view to securing their	ing the best methods with a
	adoption.	view to securing their adop-
		tion.
Arid States (in general):	Arid States (in general):	Arid States (in general):
Collection, collation, and preparation for publication of	Collection, collation, and prep-	Collection, collation, and
information relating to the preparation of land for	aration for publication of	preparation for publication
irrigation; laying out and building farm ditches; con-	information relating to the	of information relating to
struction of farm reservoirs; use of windmills for sup-	preparation of land for irri-	the preparation of land for
plying water for irrigation; and the application of	gation; laying out and build-	irrigation; laying out and
water to crops usually grown in these regions, such	ing farm ditches; construc-	building farm ditches; con-
as alfalfa, potatoes, sugar beets, grain, etc.....	tion of farm reservoirs; use	struction of farm reser-
	of windmills for supplying	voirs; use of windmills for
	water for irrigation; and the	supplying water for irri-
	application of water to crops	gation; and the application of
	usually grown in these re-	water to crops usually
	gions, such as alfalfa, pota-	grown in these regions,
	toes, sugar beets, grains, etc.;	such as alfalfa, potatoes,
	mechanical tests of engines	sugar beets, grains, etc.;
	and windmills used for	mechanical tests of engines
	pumping water for irrigation	and windmills used for
	for the purpose of suggest-	pumping water for irri-
	ing improvements in their	gation for the purpose of sug-
	construction.....	gesting improvements in
	2,900.00	their construction; studies
		of the organization and
		management of irrigation
		enterprises.....
		3,000.00
Arizona:	Arizona:	Arizona:
Studies of irrigation practice and methods of im-	Studies of irrigation practice	Studies of irrigation practice
provement.....	and methods of improve-	and methods of improve-
	ment.....	ment.....
	1,600.00	1,600.00
3,102.90		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Irrigation investigations, 1910, \$75,000—Continued.</i>	<i>Irrigation investigations, 1911, \$70,380—Cont'd.</i>	<i>Irrigation investigations, 1912, \$80,000—Cont'd</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>
California: Studies of irrigation conditions in various parts of the State; demonstration in the adaptation of methods to crops and soils; experiments to determine the extent of evaporation losses and the effectiveness of methods of checking them; experiments with canal linings; maintenance of Pacific coast headquarters..	California: Studies of irrigation practice throughout the State; experiments to determine the extent of evaporation losses and the effectiveness of methods of checking them; experiments with canal linings; experiments with measuring devices; studies of pumping water for irrigation; demonstration of standard methods of applying water to land.....	California: Studies of irrigation practice throughout the State; experiments to determine the extent of evaporation losses and the effectiveness of methods of checking them; experiments with canal linings; experiments with measuring devices; studies of pumping water for irrigation; demonstration of standard methods of applying water to land.....
\$7,373.59	\$7,000.00	\$7,000.00
Colorado: Comparison of results of irrigation of orchards under practice common to this section with Pacific coast methods to determine whether equally good results may be obtained with less water than is now commonly used; experiments in the application of water to sugar beets by different methods and comparison with the general practice in this section, together with different degrees of cultivation after irrigation, to determine the effect upon the quantity of water needed by the crops (see also Irrigation extension).....	Colorado: Experiments in orchard irrigation to work out improvements in practice and determine the quantities of water required to secure the best results; experiments in the irrigation of sugar beets to determine the best methods of applying water and the proper quantities to apply (see also Irrigation extension).....	Colorado: Experiments in orchard irrigation to work out improvements in practice and determine the quantities of water required to secure the best results; experiments in the irrigation of sugar beets to determine the best methods of applying water and the proper quantities to apply; studies of irrigation practice and methods of improvement (see also Irrigation extension).....
1,750.40	1,800.00	4,000.00
Humid States (in general): Studies of irrigation practice throughout the humid sections of the United States, and experiments testing the value of different methods of applying water to truck and other crops.....	Humid States (in general): Studies of irrigation possibilities and practice throughout the humid sections of the United States and experiments along the same line, carried on in cooperation with local interests....	Humid States (in general): Studies of irrigation possibilities and practice throughout the humid sections of the United States and experiments along the same line, carried on in cooperation with local interests...
3,790.42	3,600.00	3,600.00
Idaho: Studies of methods of bringing new land under cultivation and quantities of water required; determination of the effect of using different quantities of water applied by different methods; determination of best methods of preparing land for irrigation, and applying water to crops; experiments to determine extent of evaporation losses and effectiveness of methods of preventing them.....	Idaho: Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; measurements of quantities of water used; experiments to determine and demonstrate the best methods of preparing new land for irrigation and applying water.....	Idaho: Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; measurements of quantities of water used; experiments to determine and demonstrate the best methods of preparing new land for irrigation and applying water.....
4,507.12	4,000.00	4,000.00
Iowa: Experiments to determine the value of irrigation in the humid region; in sewage irrigation; with cement tile subirrigation.....	Iowa: Experiments to determine the value of irrigation in the humid region; experiments in sewage irrigation and with cement tile for subirrigation (allotment included under humid States).	Iowa: Experiments to determine the value of irrigation in the humid region; experiments in sewage irrigation and with cement tile for subirrigation (allotment included under humid States).
400.00		
Kansas: Studies of methods of applying water to crops and of pumping water for irrigation; experiments in winter irrigation to determine the practicability of applying water only during the winter and spring when the water supply is ample.....	Kansas: Studies of methods of applying water to crops and of pumping water for irrigation; experiments in winter irrigation to determine the practicability of applying water only during the winter and spring when the water supply is ample.....	Kansas and Oklahoma: Studies of methods of applying water to crops and of pumping water for irrigation; experiments in winter irrigation to determine the practicability of applying water only during the winter and spring when the water supply is ample.....
999.38	1,600.00	3,000.00
Louisiana, Texas, and Arkansas (rice): Measurements of quantities of water used in irrigating rice; studies of irrigation practice in rice growing and pumping water for irrigation.....	Louisiana, Texas, and Arkansas (rice): Measurement of quantities of water used for the irrigation of rice; studies of irrigation practice in rice growing and in pumping water for irrigation.....	Louisiana, Texas, and Arkansas (rice): Measurement of quantities of water used for the irrigation of rice; studies of irrigation practice in rice growing and in pumping water for irrigation.....
3,017.71	3,000.00	3,000.00
Minnesota: Experiments in pumping water from swamped areas and applying it to uplands for the improvement of both.....	Minnesota: Experiments in pumping water from swamped areas and applying it to uplands for the improvement of both (allotment included under humid States).	Minnesota: Experiments in pumping water from swamped areas and applying it to uplands for the improvement of both (allotment included under humid States).
400.00		
Montana: Experiments to determine the losses of water from irrigated lands by evaporation and the efficiency of methods of preventing these losses.....	Montana: Experiments to determine the losses of water by evaporation from the soil and the effectiveness of methods of checking them.....	Montana: Experiments to determine the losses of water by evaporation from the soil and the effectiveness of methods of checking them; studies of irrigation practice, and methods of improvement.....
440.00	250.00	250.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Irrigation investigations, 1910, \$75,000—Continued.</i>	<i>Irrigation investigations, 1911, \$70,380—Continued.</i>	<i>Irrigation investigations, 1912, \$80,000—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>
Nebraska:	Nebraska:	Nebraska:
Studies of irrigation practice and of the possibilities of irrigating small areas in connection with the farming of larger areas without irrigation.....	Studies of irrigation practice and of the possibilities of irrigating small areas in connection with the farming of larger areas without irrigation.....	Studies of irrigation practice and of the possibilities of irrigating small areas in connection with the farming of larger areas without irrigation.....
	\$1,250.00	\$1,250.00
Nevada:	Nevada:	Nevada:
Experiments to determine the losses of water from irrigated lands and methods of checking these losses, and studies of irrigation practice.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; experiments to determine the proper quantities of water to apply.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; experiments to determine the proper quantities of water to apply.....
\$1 000.00	500.00	500.00
New Jersey:	New Jersey:	New Jersey:
Experiments to determine the practicability of irrigation.....	Experiments to determine the practicability of irrigation..	Experiments to determine the practicability of irrigation.....
200.00	200.00	200.00
New Mexico:	New Mexico:	New Mexico:
Experiments to determine the losses of water from irrigated lands by evaporation and the methods of preventing these losses, and studies of irrigation practice.....	Experiments to determine the extent of losses of water by evaporation from the soil and of the effectiveness of methods of checking them; studies of irrigation practice; studies of pumping water for irrigation.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; studies of irrigation practice; studies of pumping water for irrigation.....
1,677.76	1,500.00	1,500.00
North Dakota:	North Dakota:	North Dakota:
Experiments to determine the losses from irrigated lands by evaporation, and methods of preventing these losses.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them..	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking them; studies of irrigation practice and methods of improvement.....
150.00	250.00	250.00
Oregon:	Oregon:	Oregon:
Investigations and experiments to determine the practicability of irrigation during the dry summer months in the Willamette and Rouge River Valleys, and investigations of irrigation practice in eastern Oregon.....	Investigations and experiments to determine the practicability of irrigation in the Rouge River Valley during the dry summer months; investigations of irrigation practice in eastern Oregon.....	Investigations and experiments to determine the practicability of irrigation in the Rouge River Valley during the dry summer months; investigations of irrigation practice in eastern Oregon.....
2,926.19	1,500.00	1,500.00
South Dakota:	South Dakota:	South Dakota:
Studies of irrigation practice.....	Studies of irrigation practice..	Studies of irrigation practice.
	900.00	900.00
Texas:	Texas:	Texas:
Studies of irrigation practice and the collection of information regarding agricultural conditions in the irrigated sections.....	Studies of irrigation practice and furnishing advice to settlers and canal builders as to methods of preparing land for irrigation and applying water to crops.....	Studies of irrigation practice and furnishing advice to settlers and canal builders as to methods of preparing land for irrigation and applying water to crops.....
2,710.83	3,500.00	3,500.00
Utah:	Utah:	Utah:
Studies of irrigation practice throughout the State and experiments to determine the quantities of water giving the best results.....	Experiments to determine the water requirements of crops; studies of irrigation practice.....	Experiments to determine the water requirements of crops; studies of irrigation practice.....
2,364.56	2,350.00	2,350.00
Washington:	Washington:	Washington:
Studies of irrigation practice throughout the State and experiments to determine the losses of water from irrigated lands by evaporation, and methods of preventing them.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking these losses; studies of irrigation practice throughout the State.....	Experiments to determine the extent of losses of water by evaporation from the soil and the effectiveness of methods of checking these losses; studies of irrigation practice throughout the State.....
3,133.44	3,500.00	3,500.00
Wyoming:	Wyoming. (See Irrigation extension.)	Wyoming. (See Irrigation extension.)
Soil moisture determination (see also Irrigation extension).....		
250.00		
On irrigation extension:	On irrigation extension:	On irrigation extension:
Experiments to determine the practicability of irrigation in sections where it has been practiced generally, chiefly in the semiarid plains where river water is not available, the work including studies of the possibilities and cost of securing water supplies by pumping with different kinds of water power and different types of pumps and by storing storm waters; studies of the methods of applying water in order to secure the largest use of the small supply available. These studies will be carried on principally at stations established for that purpose:	Experiments to determine the practicability of irrigation in sections where it has not been practiced generally, chiefly on the semiarid plains where water from streams is not available. This work includes studies of the possibilities and cost of securing water supplied by pumping with different kinds of power and types of pumps and by storing storm waters; and methods of applying water in order to secure the largest use of the small supply available. These investigations will be carried on principally at the following stations:	Experiments to determine the practicability of irrigation in sections where it has not been practiced generally, chiefly on the semiarid plains where water from streams is not available. This work includes studies of the possibilities and cost of securing water supplies by pumping with different kinds of power and types of pumps and by storing storm waters; and methods of applying water in order to secure the largest use of the small supply available. These investigations will be carried on principally at the following stations:
Cheyenne, Wyo.....	Cheyenne, Wyo.....	Cheyenne, Wyo.....
\$3,460.44	\$3,500.00	\$3,500.00
Newcastle, Wyo.....	Newcastle, Wyo.....	Newcastle, Wyo.....
2,554.93	2,500.00	2,500.00
Eads, Colo.....	Eads, Colo.....	Eads, Colo.....
2,961.77	2,800.00	2,800.00
8,977.14	8,800.00	8,800.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Irrigation investigations, 1910, \$75,000—Continued.</i>	<i>Irrigation investigations, 1911, \$75,000—Cont'd.</i>	<i>Irrigation investigations, 1912, \$80,000—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>	<i>On the use of water in irrigation and technical investigations—Continued.</i>
Aid and advice to settlers: Very large areas have been brought under canal during the past few years, and these are being settled by farmers who are unfamiliar with irrigation. Aid is being extended to these settlers by personal advice, supplemented very largely by the publication of bulletins on practical methods of bringing new land under irrigation and of supplying water to crops; information regarding the opportunities for settlement and conditions to be met is being supplied also by means of bulletins (cost included in arid States).	Aid and advice to settlers: A large part of the work of the regular force will consist in furnishing advice to settlers through personal interviews, illustrated lectures, and the preparation of practical bulletins on irrigation practice. The cost of this work is included in the estimates for the separate projects.	Aid and advice to settlers: A large part of the work of the regular force will consist in furnishing advice to settlers through personal interviews, illustrated lectures, and the preparation of practical bulletins on irrigation practice. The cost of this work is included in the estimates for the separate projects.
Maintenance of a central supply station and headquarters for irrigation extension work at Cheyenne, Wyo. ....	Maintenance of a central supply station and headquarters for irrigation extension work at Cheyenne, Wyo. ....	Maintenance of a central supply station and headquarters for irrigation extension work at Cheyenne, Wyo. ....
Maintenance of instrument repair shop and meter-rating station, Berkeley, Cal. ....	Maintenance of meter-rating station and instrument repair shop, Berkeley, Cal. ....	Maintenance of meter-rating station and instrument repair shop, Berkeley, Cal. ....
Miscellaneous supplies, apparatus, furniture, etc. ....	Miscellaneous supplies, instruments, furniture, etc. ....	Miscellaneous supplies, instruments, furniture, etc. ....
General planning and supervision of irrigation investigations throughout the United States; preparation of reports; drafting and other work on illustrations; correspondence with field agents and the public; purchase of field instruments, accessories, etc. ....	General planning and supervision of irrigation investigations throughout the United States; preparation of reports, drafting, and other work on illustrations; correspondence with field agents and the public; purchase of field instruments, accessories, etc. ....	General planning and supervision of irrigation investigations throughout the United States; preparation of reports, drafting, and other work on illustrations; correspondence with field agents and the public; purchase of field instruments, accessories, etc. ....
	Reserved for extensions and new work. ....	Reserved for extensions and new work. ....
73,353.40	70,380.00	80,000.00
<i>Drainage investigations, 1910, \$81,160.</i>	<i>Drainage investigations, 1911, \$78,860.</i>	<i>Drainage investigations, 1912, \$80,000.</i>
Salaries: In Washington. ....	Salaries: In Washington. ....	Salaries: In Washington. ....
Out of Washington. ....	Out of Washington. ....	Out of Washington. ....
Stationery. ....	Stationery. ....	Stationery. ....
Miscellaneous supplies and services, equipment, books, machinery, etc. ....	Miscellaneous supplies, services, equipment, books, machinery, etc. ....	Miscellaneous supplies, services, equipment, books, machinery, etc. ....
Furniture. ....	Furniture. ....	Furniture. ....
Freight. ....	Freight. ....	Freight. ....
Express. ....	Express. ....	Express. ....
Telegraph. ....	Telegraph. ....	Telegraph. ....
Telephone. ....	Telephone. ....	Telephone. ....
Rent. ....	Rent. ....	Rent. ....
Apparatus, instruments, and laboratory material. ....	Apparatus, instruments, and laboratory material. ....	Apparatus, instruments, and laboratory material. ....
Travel and station and field expenses. ....	Travel and station and field expenses. ....	Travel and station and field expenses. ....
Total expenditures to Aug. 31, 1910. ....		
Total amount of above appropriation. ....		
Total expenditures under above groups. ....		
Unexpended balance on Aug. 31, 1910. ....		
Repayments to credit of appropriation. ....		
Net unexpended balance. ....		
Outstanding liabilities (estimated). ....		
Balance to be turned back in Treasury (estimated). ....		
Total amount of above appropriation. ....	Total amount of above appropriation (a decrease from 1910 of \$2,300) ...	Total amount estimated (an apparent increase over 1911 of \$1,140) ...

NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1910, enabling the Secretary of Agriculture to investigate and report upon the drainage of swamp and other wet lands and to prepare plans for the removal of surplus waters by drainage, etc., the expenditures by States for this work being as follows:

NOTE.—The above proposed expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, will be necessary to carry out the provisions of an act making appropriations for the Department of Agriculture for the fiscal year 1911, enabling the Secretary of Agriculture to investigate and report upon the drainage of swamp and other wet lands and to prepare plans for the removal of surplus waters by drainage and for the preparation and illustration of reports and bulletins on drainage, etc., the proposed expenditures by States for this work being as follows:

NOTE.—Apparent increase \$1,140, but adding the salaries of places transferred to the statutory roll (\$4,840), an increase of \$5,980.

NOTE.—The above estimates, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary to enable the Secretary of Agriculture to complete and report upon investigations now in progress; to more promptly meet demands for advice and assistance in planning the reclamation of swamp lands in the several States and Territories; and for the continuation and extension of the work to different localities. The proposed expenditures by States for this work is as follows:

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Drainage investigations, 1910, \$81,160—Continued.</i>	<i>Drainage investigations, 1911, \$78,860—Continued.</i>	<i>Drainage investigations, 1912, \$80,000—Cont'd.</i>
Arkansas..... \$5,707.13	Arkansas..... \$3,000.00	Arkansas..... \$3,000.00
Atlantic Coast States (in general)..... 1,753.78	Atlantic Coast States (in general)..... 1,000.00	Alabama..... 1,000.00
California..... 110.10	California..... 500.00	Atlantic Coast States (in general)..... 3,000.00
Colorado..... 5,631.32	Colorado..... 3,500.00	Colorado..... 3,000.00
Delaware and Maryland..... 413.45	Illinois..... 1,000.00	Delaware and Maryland..... 3,000.00
Florida..... 386.50	Iowa..... 6,000.00	Georgia..... 2,000.00
Illinois..... 310.93	Kansas..... 5,100.00	Kansas..... 2,000.00
Iowa..... 3,715.15	Kentucky..... 100.00	Louisiana..... 2,000.00
Kansas..... 8,355.67	Louisiana..... 2,000.00	Mississippi..... 2,500.00
Kentucky..... 364.04	Mississippi..... 4,000.00	New Mexico..... 2,000.00
Louisiana..... 5,549.26	Nebraska..... 2,500.00	North Carolina..... 3,000.00
Mississippi..... 1,253.34	New Mexico..... 2,000.00	Oklahoma..... 2,000.00
Nebraska..... 3,244.21	North Carolina..... 5,450.00	South Carolina..... 2,500.00
New Mexico..... 391.63	Oklahoma..... 2,400.00	Tennessee..... 3,000.00
North Carolina..... 7,930.68	South Carolina..... 700.00	Texas..... 3,500.00
Oklahoma..... 4,142.42	Texas..... 1,000.00	Utah..... 3,000.00
Oregon..... 76.65	Utah..... 3,000.00	Virginia..... 3,500.00
South Carolina..... 306.37	Virginia..... 600.00	Washington..... 3,500.00
Texas..... 1,744.46	Washington..... 2,650.00	Wyoming..... 2,500.00
Utah..... 3,203.33	Wyoming..... 1,200.00	Advisory and consulting work and special scientific investigations..... 10,000.00
Virginia..... 672.32	Advisory and consulting work and special scientific investigations..... 11,000.00	
Wyoming..... 320.00		
Advisory and consulting work and special scientific investigations..... 8,752.34		
64,315.08	58,700.00	61,000.00
PROJECTS.	PROJECTS.	PROJECTS.
The expenditures in connection with the investigations were distributed largely among definite projects, the object and estimated cost of each being stated below:	The proposed expenditures in connection with the investigations will be distributed largely among definite projects, the object and estimated cost of each being as stated below:	The proposed expenditures in connection with the investigations will be distributed largely among definite projects, the object and estimated cost of each being as stated below:
Arkansas:	Arkansas:	Arkansas:
For extending the surveys for the drainage of the lands in the St. Francis Basin as a whole, and for determining the drainage units into which it should be divided; to determine the size of the ditches which should be employed; to assist local engineers and county drainage authorities in planning and directing the work; preliminary drainage surveys in parts of the State where questions arise among landowners regarding the feasibility of contemplated drainage work; examination of natural drainage streams and recommendations as to how they may be most effectually improved and the cost of the work required and the preliminary examination of 20,000 acres of overflowed land in Independence County... 5,707.13	For examination and plans for reclaiming lands in the St. Francis Basin lying south of Crittenden County; and the devising and preparation of plans for draining lands along Black River in Independence County and in Desha and Chicot Counties, and other parts of the State in cooperation with property owners and local drainage engineers..... 3,000.00	For advisory assistance to drainage commissioners in the St. Francis Valley in the development of drainage works, original plans by this office, working out unit drainage areas in the valleys of the Black and White Rivers and in the counties of Desha and Chicot and for continuing preliminary drainage surveys in the lower part of the St. Francis Valley..... 3,000.00
Atlantic Coast States (in general):	Atlantic Coast States (in general):	Alabama:
Examination of coast dikes, sluices and gates required for the protection of tidal lands which may be made suitable for agriculture; determination of the cause of their failure and cost of stable structures; experiments with automatic sluice gates..... 1,753.78	Preparation of plans for and advisory cooperation in the experiments in the reclamation of tidal land; collection of data of work already accomplished between North Carolina and New Jersey... 1,000.00	For special examinations and reports upon lands which are susceptible of drainage for agriculture.... 1,000.00
California:	California:	Atlantic Coast States (in general):
Development of plans for the organized drainage of lands in the Fresno and Turlock districts where both pumping and gravity drainage is required..... 110.10	For preparing a plan for draining the Fresno district through a gravity outlet into the San Joaquin River.... 500.00	For making designs and recommendations for the construction of experimental drainage banks and sluices for the reclamation of lands at various points along tidal rivers of the coast, in cooperation with landowners planning to undertake such work for agricultural purposes..... 3,000.00
Colorado:	Colorado:	Colorado:
Continuation of the investigations to ascertain practical methods for reclaiming seeped lands in the valleys of the Grand and Gunnison Rivers and the San Luis Valley, which are seriously injured by overirrigation and alkali, and preparation of drainage plans for landowners based upon the results of experiments and successful practice upon lands of similar character..... 5,631.32	For planning and directing experimental drainage of seeped and alkaline lands in the valley of the Grand River on the western slope; in the Arkansas Valley on the eastern slope; and in the San Luis Valley in the south..... 3,500.00	For continuing experimental drainage of seeped and alkaline lands in the valley of the Grand River; assisting the settlers of the San Luis Valley in preparing drainage plans and suggesting needed amendments to the State drainage law.... 3,000.00
Delaware and Maryland:		Delaware and Maryland:
Examination of tidal lands suitable for agriculture... 413.45		Working out plans for draining the lowlands, especially of the Maryland Peninsula, in cooperation with farmers who are desirous of improving their lands..... 2,000.00
Florida:		
Field determination of drainage properties and water content of muck and turf soils which may be drained for agriculture, particularly in the Kissimmee Valley and in the Everglades region..... 386.50		

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## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Drainage investigations, 1910, \$81,160—Continued.</i>	<i>Drainage investigations, 1911, \$78,860—Continued.</i>	<i>Drainage investigations, 1912, \$60,000—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Georgia:	Georgia:	Georgia:
	For examination of valleys overflowed by small streams and adjacent eroded hillsides for the purpose of devising methods of restoring such lands to production; Examinations and reports upon the reclamation of the coastal plain lands of the State (included under Special scientific investigations.)	Continuing preliminary examinations already made in southeastern Georgia with more complete investigations; cooperation with landowners in experimental drainage of lowlands; examination and reports upon river valleys where interest is shown in their drainage. ....
Illinois:	Illinois:	Illinois. (See Special scientific investigations.)
Studies of the effect upon the lower valley lands of the extension district and farm drainage systems which have been in operation for a number of years; continuing the collection of data of run-off from drained areas of various dimensions and classification and compilation of such information; drainage survey to determine the best method of improving the Kaskaskia River lands. ....	Studies of the effect upon the lower valley lands of the extension district and farm drainage systems which have been in operation for a number of years; continuing the collection of data of run-off from drained areas of various dimensions and classification and compilation of such information; drainage survey to determine the best method of improving the Kaskaskia River lands. ....	\$2,000.00
\$310.93	\$1,000.00	
Indiana:	Iowa:	Iowa. (See Special scientific investigations.)
Run-off from drained areas. (Included under Special scientific investigations.)	Cooperation with a commission appointed by the governor to devise a comprehensive plan for the conservation of soil fertility and protection of the valley lands of the larger streams of the State; the investigations to include a representative drainage survey of the Upper Des Moines River and examinations and reports upon drainage operations in representative counties in the State. ....	
Iowa:		
Examination of drainage districts in Hancock, Kosuth, Paltto Alto, Pocahontas, and Carroll counties and of levee and pumping districts along the Mississippi River to secure data for use in the consideration of State drainage problems. ....		
3,715.15	6,000.00	
Kansas:	Kansas:	Kansas:
Determination of the value of tile drainage for the lands of southeastern Kansas, investigations to be carried on in cooperation with farmers; drainage surveys to determine the best plan for preventing the overflow of about 80,000 acres in the valley of the Marais des Cygnes lying in Osage, Franklin, Miami, and Linn counties and improving the Little Caney River to prevent overflows and provide an outlet for drainage of the adjacent lands. ....	For examinations, surveys, and reports upon the reclamation of overflowed lands in the valley of the Cottonwood River and of the Kansas River in Douglas County	Further examinations and surveys for the purpose of determining the practicability of reclaiming the overflowed lands along the Verdigris and Kansas Rivers and furnishing assistance in the organization of drainage projects previously reported upon by the office. ....
\$,355.67	5,100.00	2,000.00
Kentucky:	Kentucky:	Louisiana:
Drainage survey of selected tract for purpose of preparing plans for experimental drainage system. ....	Drainage survey of selected tract for purpose of preparing plans for experimental drainage system. ....	For continuing run-off investigations on the coast lands where drainage by pumping is practiced, and working out unit drainage projects in the northern part of the State. ....
364.04	100.00	3,000.00
Louisiana:	Louisiana:	Mississippi:
Determination of the cost of securing better drainage by opening and cleaning natural bayous in the northern part of the State and whether benefits secured will justify the expense, special localities to be examined; continuation of run-off investigations and collection of information concerning conditions affecting maintenance of ditches and methods of doing the work and the cost of drainage work. ....	Determination of the cost of securing better drainage by opening and cleaning natural bayous in the northern part of the State and whether benefits secured will justify the expense, special localities to be examined; continuation of run-off investigations and collection of information concerning conditions affecting maintenance of ditches and methods of doing the work and the cost of drainage work. ....	Determining such unit drainage districts as may be found practicable and suggesting their organization to owners of land within their limits; investigating run-off conditions peculiar to the delta lands. ....
5,549.26	2,000.00	3,500.00
Mississippi:	Mississippi:	
Examination and development of plans for the drainage of areas in Sunflower and Holmes counties and for testing the efficiency of underdrains in Warren and Holmes counties; completion of the drainage survey and plans for the improvement of the Tuscumbia River. ....	For cooperation with landowners in the Yazoo Delta to ascertain best methods of draining "buckshot" and other heavy soils. Advisory assistance to the local engineer of the Bolivar County drainage in carrying out plans made by this office; surveys and plans for Belzona drainage region in Washington County. ....	
1,233.34	4,000.00	

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Drainage investigations, 1910, \$81,160—Continued.</i>	<i>Drainage investigations, 1911, \$78,860—Cont'd.</i>	<i>Drainage investigations, 1912, \$80,000—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Nebraska:	Nebraska:	
Surveys and plans for a general drainage system in Holt County and advisory assistance to drainage commissioners in carrying out the projects for which plans were made by this office in 1909; completion of drainage surveys and plans for the relief of lands along Salt and Wahoo creeks; drainage survey to determine best plan to prevent overflow of the Nehama River in Pawnee County.....	Surveys and plans for proper drainage of bench lands lying above banks of upper Elkhorn River with recommendations for establishment of drainage district as a demonstration of possible improvement.....	
\$3,244.21	\$2,500.00	
New Mexico:	New Mexico:	New Mexico:
Investigation of seeped and alkali-injured farm lands to ascertain best method of reclamation.....	Investigation of seeped and alkali-injured farm lands to ascertain best method of reclamation.....	For examination of seeped and alkaline lands in the Pecos Valley and directing efforts of farmers desiring to reclaim them.....
391.63	2,000.00	\$2,000.00
North Carolina:	North Carolina:	North Carolina:
Examination and plans for the drainage of portions of Robeson and Bladen Counties, and for assisting the people in carrying out the plans prepared by this office in 1909; continuation of the drainage surveys and preparation of the plans for drainage about Lake Phelps and Pantego Creek; survey and plan for improvement of Pungo River to furnish an outlet for the Pungo drainage district; survey to determine a practical plan for reclaiming and permanently protecting the overflowed lands of the Roanoke River Valley between Halifax and the coast; survey and plan of drainage for Lyon Swamp, to reclaim about 10,000 acres of swamp and overflowed lands in Bladen County; preliminary examinations of Belvidere Swamp, in Perquimans County, and the wet lands in Richland Township, Beaufort County, and the lands requiring drainage in Pasquotank County with Little River as an outlet.....	For cooperating with the State department of agriculture in the construction of experimental tile-drainage systems on test farms and making plans and specifications for drainage districts in Robeson and Iredell Counties and completing designs for draining the region between the Albemarle and Pamlico Sounds.....	For assisting landowners and drainage districts in developing efficient drainage methods; compiling, tabulating, and reporting work done, and investigating special drainage problems.....
7,930.68	5,450.00	3,000.00
North Dakota. (Included under Special scientific investigations.)		
Oklahoma:	Oklahoma:	Oklahoma:
Drainage survey and plans for the proposed improvement of the Dry Fork and Deep Fork Rivers by means of straightening, channel cleaning, etc., to protect agricultural bottom lands from overflow....	For investigation and survey of overflowed lands in the Black Bear Creek Valley, Noble and Pawnee Counties; examination of the Washita Valley and advice to county commissioners regarding its drainage.....	For making examinations of specific drainage areas; advising drainage commissioners with reference to the surveys that should be made by local engineers, and plans that should be adopted for reclaiming the lands.....
4,142.42	2,400.00	2,000.00
Oregon:		
Determination of value of tile drainage in reclaiming worn-out and "water-logged" wheat lands in Willamette Valley.....		
76.65		
South Carolina:	South Carolina:	South Carolina:
Meander of Cedar Creek to determine approximate cost of providing drainage for swampy creeks, vicinity of Hopkins.....	For examinations, surveys, and advice in connection with proposed reclamation of abandoned plantations; plans for main drainage of 30,000 acres in the Hopkins region, in Richland County, and recommendations for the drainage of a part of James Island, cooperating with farmers who request assistance in plans for underdraining their lands.....	For assisting plantation owners in planning tile drainage systems on their lands and in laying out districts in the coastal plain of the State.....
306.37	700.00	2,500.00
Texas:	Texas:	Texas:
Investigations in the Brownsville district to ascertain methods that should be used in draining irrigated lands used for growing sugar cane; preparation of drainage plans for various ranch owners in southern and southwestern Texas; computations, plans, and reports upon the Chambers Creek drainage district, in vicinity of Waxahachie.....	For investigations in the Rio Grande and Pecos Valleys with reference to needed drainage of irrigated land which is now wet and overcharged with injurious salts.....	To continue experimental drainage in cooperation with land owners in irrigated sections of the Rio Grande Valley; locating and planning drainage works for the reclamation of overflowed valleys.....
1,744.46	1,000.00	3,500.00
Utah:	Utah:	Utah:
Cooperative work with farmers in draining saturated and alkaline irrigated lands and experiments with different materials for drains; topographic drainage survey of portion of Millard County and plans for its reclamation and future protection from seepage and alkali; continuation of the St. George and Huntington drainage experiments; drainage district surveys and plans in Utah, Sevier, and Davis Counties; experiments in laboratory and field to determine the effect of alkali on cement tile.....	For drainage surveys and furnishing plans for farmers desiring to drain seeped lands under a cooperative fund provided by the State and this department.....	For collecting and disseminating results of drainage work done in the State by this office in cooperation with the State and further assisting landowners in solving difficult drainage problems.....
3,203.33	3,000.00	3,000.00

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## Office of Experiment Stations—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Drainage investigations, 1910, \$81,160—Continued.</i>	<i>Drainage investigations, 1911, \$73,860—Cont'd.</i>	<i>Drainage investigations, 1912, \$80,000—Cont'd.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
Virginia:	Virginia:	Virginia:
Investigation of the lands of the Dismal Swamp with reference to their drainage and examination of a part of the coastal lands of the State. Plans for drainage of Cumberland farm, near Grassfield, Norfolk, Va.....	For assistance to farmers in devising and carrying out plans for draining lands now under cultivation; surveys and plans for the drainage of unreclaimed lands bordering the Dismal Swamp.....	For making surveys and plans for the drainage of Dismal Swamp and assisting landowners in the organization of drainage districts provided for by the new law.....
\$672.32	\$600.00	\$3,500.00
	Washington:	Washington:
	Supervisory assistance in perfecting the drainage of the lands in the Moxee and Sunnyside districts in Yakima County and assistance to the people of Skagit County in perfecting the levee along the Skagit River	For further assisting ranchers in plans for draining the irrigated lands in the Yakima Valley and for perfecting plans for the reclamation of agricultural lands adjoining Puget Sound....
	2,650.00	3,500.00
Wyoming:	Wyoming:	Wyoming:
Cooperation with farmers of irrigated land in the Big Horn Basin in planning drainage ditches for seeped lands.....	For assistance to farmers in the Big Horn and Gray Bull valleys in reclaiming seeped and alkaline land.....	For continuing cooperative drainage experiments on irrigated lands in the Big Horn Basin.....
329.00	1,200.00	2,500.00
Advisory and consulting work and special scientific investigations:	Advisory and consulting work:	Advisory and consulting work:
Examinations upon request of engineers and drainage boards, of proposed drainage plans and advisory reports upon the same; consultation with State committees upon draining policies and laws and feasibility of large drainage improvements, plans for which are in the hands of special local engineers; investigations relating to run-off to be provided for in different climates and different kinds of lands; effect of underdrains of different kinds and in different soils upon the water content; of the use of cement drain tile; lectures, addresses, and written articles for the dissemination of popular information upon the subject.....	For examinations and reports upon requests of engineers and drainage boards upon the merits of proposed plans of drainage; consultation with State and county commissioners upon drainage policies, laws, and current practice.....	For examinations and reports, as requested by engineers and drainage boards, upon the merits of contemplated plans of drainage; consultation with State commissions, drainage committees, and county commissioners upon drainage policies, laws, and current drainage practice....
8,752.34	5,000.00	5,000.00
	Special scientific investigations:	Special scientific and technical investigations:
	For conducting investigations relating to run-off from different classes of lands; relative efficiency of different kinds of drains; methods of cleaning drain-tile laid in irrigated lands; tests of cement tiles and erosion and sedimentation of ditches...	For conducting investigations to determine run-off from different classes of lands and efficiency of different kinds of drains; methods of preventing erosion of ditch banks and levees and sedimentation of ditches; quantity of water that should be removed from soils of different kinds and in different climates..
	6,000.00	5,000.00
	Reserve:	Reserve:
	Investigations for which plans have not been definitely formulated, provision for costs in excess of allotments, and for new projects which later developments may demand.....	Investigation for which plans have not been definitely formulated; provisions for costs in excess of allotments, and for new projects which later developments may demand....
	8,160.00	7,000.00
Miscellaneous supplies, apparatus, furniture, etc.....	Miscellaneous field supplies, instruments, etc.....	Miscellaneous field supplies, instruments, etc.....
8,229.06	7,000.00	4,000.00
General planning and supervision of drainage investigations throughout the United States; preparation of reports; drafting and other work on illustrations, correspondence with field agents, and the public purchase of field instruments and accessories, etc.....	General planning and supervision of drainage investigations throughout the United States; preparation and revision of reports; drafting and other work on maps and illustrations, office supplies, furniture, etc.....	General planning and supervision of drainage investigations throughout the United States; preparation and revision of reports; drafting and other work on maps and illustrations, office supplies, furniture, etc.....
3,551.77	5,000.00	8,000.00
76,095.91	78,860.00	80,000.00
Total appropriations for the Office of Experiment Stations (less \$720,000 for State experiment colleges disbursed by Treasury).....	Total appropriations for the office of Experiment Stations (less \$720,000 for State experiment colleges disbursed by Treasury), (a decrease from 1910 of \$1,400).....	Total amount estimated for the Office of Experiment Stations (less \$720,000 for State experiment colleges and \$720,000 for Adams Act, to be disbursed by Treasury) (an apparent increase over 1911 of \$66,180).....
349,220.00	347,820.00	414,000.00
Total expenditures to Aug. 31, 1910.....		
334,120.05		
Outstanding liabilities on Aug. 31, 1910 (estimated).....		
6,660.19		
Balance to be turned back in Treasury (estimated).....		
8,439.76		

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## OFFICE OF PUBLIC ROADS.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 14, 1912.
<i>Salaries, Office of Public Roads, 1910, \$16,460.</i>	<i>Salaries, Office of Public Roads, 1911, \$21,260.</i>	<i>Salaries, Office of Public Roads, 1912, \$34,060.</i>
Page, L. W. .... Director, at \$3,000..... \$3,000.00 Wyatt, W. Carl. .... Chief clerk, at \$1,600..... 1,600.00 Coleman, Lucie J. .... } 80.00 Lumpkin, Alice I. .... } Clerk, class 1..... 550.00 Robey, E. R. .... } 563.33 Davies, Alice L. .... Clerk, class 1..... 1,200.00 Francis, Grace. .... Clerk, class 1..... 1,200.00 Hansen, L. .... Clerk, class 1..... 1,200.00 Dryer, Bernice A. .... Clerk, at \$1,000..... 1,000.00 Passe, Deme. .... Clerk, at \$1,000..... 1,000.00 Pierce, Anna L. .... Clerk, at \$1,000..... 1,000.00 Wells, E. M. .... Clerk, at \$1,000..... 1,000.00 Bechtold, John M. .... Clerk, at \$900..... 897.50 Grant, William. .... } Laborer, at \$600..... 200.00 Holder, Herbert. .... } 400.00 Turner, Edward. .... Laborer, at \$600..... 600.00 Carroll, Louis W. .... } Messenger, at \$600..... 175.00 Grant, William. .... } 400.00 Chapman, John H. .... Messenger boy, at \$360..... 360.00  Total..... 16,425.83 Unexpended balance..... 34.17	1 director, who shall be a scientist and have charge of all scientific and technical work..... \$3,000.00 1 chief clerk..... 1,600.00 1 clerk..... 1,320.00 5 clerks, class 1..... 6,000.00 1 clerk..... 1,140.00 4 clerks, at \$1,000 each..... 4,000.00 1 clerk..... 900.00 1 laborer..... 600.00 2 laborers, at \$600 each..... 1,200.00 1 messenger..... 600.00 1 messenger boy..... 480.00 1 messenger boy..... 360.00  Total amount of above appropriation (an increase over 1910 of \$4,800) .... 21,260.00	1 director, who shall be a scientist and have charge of all scientific and technical work (increase of \$1,000 submitted)..... \$4,000.00 1 chief clerk (increase of \$200 submitted)..... 1,800.00 1 clerk, class 3 (submitted)..... 1,600.00 1 clerk (by transfer from lump fund for general expenses, road management)..... 1,440.00 1 clerk..... 1,320.00 2 clerks, at \$1,260 each (1 in lieu of 1 clerk of class 1, increase of \$60, and 1 new place submitted).... 2,520.00 3 clerks, class 1 (decrease of 2 submitted)..... 3,600.00 1 clerk or photographer (in lieu of 1 clerk, class 1)..... 1,200.00 1 clerk or photographer (by transfer from lump fund for general expenses, road management)..... 1,000.00 2 clerks, at \$1,140 each (increase of 1 submitted)..... 2,280.00 1 clerk (by transfer from lump fund for general expenses, road management)..... 1,080.00 1 clerk (submitted)..... 1,020.00 4 clerks, at \$1,000 each..... 4,000.00 1 clerk..... 900.00 1 instrument maker (by transfer from lump fund for general expenses, road material)..... 1,200.00 1 messenger or laborer (submitted) 720.00 1 messenger or laborer (change of title submitted)..... 660.00 4 messengers or laborers, at \$600 each (change of title and increase of 1 submitted)..... 2,400.00 1 messenger boy..... 480.00 1 messenger boy..... 360.00 2 charwomen, at \$240 each (by transfer from lump fund for general expenses, administrative expenses)..... 480.00  Total amount estimated (an apparent increase over 1911 of \$12,800) .. 34,060.00  NOTE.—There is an increase in the above appropriation of \$12,800. Of this sum \$5,200 covers the transfer of 6 employees from the lump fund for general expenses and that fund has been reduced accordingly; \$6,340 is for new places on account of the expansion of the work, and \$1,260 is for promotions. Of the latter amount \$1,000 is to increase the salary of the chief of bureau which is well deserved and will make his salary more nearly agree with the salaries of other chiefs in the departmental service. The changes in detail are as follows: Transfers from lump fund for general expenses: 1 clerk from road management..... 1,440.00 1 clerk or photographer from road management..... 1,000.00 1 clerk from road management..... 1,080.00 1 instrument maker from road material..... 1,200.00 2 charwomen from administrative expenses..... 480.00 Promotions: 1 chief of bureau..... 1,000.00 1 chief clerk..... 200.00 1 clerk..... 60.00 New places: 1 clerk, class 3..... 1,600.00 1 clerk..... 1,260.00 1 clerk..... 1,140.00 1 clerk..... 1,020.00 1 messenger or laborer..... 720.00 1 messenger or laborer..... 600.00  12,800.00  The above force performed the following duties: Administrative and executive: 1 director..... \$3,000.00 1 chief clerk..... 1,600.00 4,600.00  The above force is performing the following duties: Administrative and executive: 1 director..... \$3,000.00 1 chief clerk..... 1,600.00 4,600.00  The above force will perform the following duties: Administrative and executive: 1 director..... \$4,000.00 1 chief clerk..... 1,800.00 5,800.00

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## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>Salaries, Office of Public Roads, 1910, \$16,460—Continued.</i>		
Correspondence and files: 4 clerks, class 1..... \$4,793.33 3 clerks, at \$1,000..... 3,000.00	Photographic and record work: 1 clerk..... \$1,320.00 1 laborer..... 660.00	Editorial and library: 1 clerk..... \$1,600.00 1 clerk..... 1,000.00
	\$1,980.00	\$2,600.00
Accounts and property: 1 clerk, at \$1,000..... 1,000.00 1 clerk, at \$900..... 897.50	Correspondence and files: 4 clerks, class 1..... 4,800.00 1 clerk, at \$1,140..... 1,140.00 4 clerks, at \$1,000..... 4,000.00	Photographic and record work: 1 clerk..... 1,440.00 1 clerk or photographer..... 1,200.00
	9,940.00	2,640.00
Care of quarters and equipment: 2 laborers, at \$600..... 1,200.00	Accounts and property: 1 clerk, class 1..... 1,200.00 1 clerk, at \$900..... 900.00	Correspondence and files: 1 clerk..... 1,320.00 2 clerks, at \$1,260.. 2,520.00 2 clerks, class 1.... 2,400.00 2 clerks, at \$1,140.. 2,280.00 1 clerk, at \$1,080.. 1,080.00 1 clerk or photographer..... 1,000.00 3 clerks, at \$1,000.. 3,000.00 1 clerk, at \$900..... 900.00
Messenger service: 1 messenger, at \$600..... 575.00 1 messenger boy, at \$360..... 360.00	Care of quarters and equipment: 2 laborers, at \$600..... 1,200.00	
	1,440.00	14,500.00
Unexpended balance (turned back into Treasury)..... 34.17	Messenger service: 1 messenger, at \$600 600.00 1 messenger boy, at \$480..... 480.00 1 messenger boy, at \$360..... 360.00	Accounts and property: 1 clerk, class 1..... 1,200.00 1 clerk, at \$1,020... 1,020.00
		2,220.00
		Road material laboratory: 1 instrument maker..... 1,200.00
		Care of quarters and equipment: 1 messenger or laborer..... 720.00 1 messenger or laborer..... 660.00 2 messengers or laborers, at \$600..... 1,200.00 2 charwomen, at \$240..... 480.00
		3,060.00
		Messenger service: 2 messengers or laborers, at \$600... 1,200.00 1 messenger boy... 480.00 1 messenger boy... 360.00
		2,040.00
		34,060.00
16,460.00	21,260.00	
<i>General expenses, Office of Public Roads, 1910 (road management), \$18,000.</i>		
Salaries: In Washington..... \$11,583.83 Out of Washington..... 1,233.50 Rent..... 791.67 Travel and station and field expenses..... 3,864.11	General expenses, Office of Public Roads, 1911 (road management), \$16,000.	General expenses, Office of Public Roads, 1912 (road management), \$21,780.
Total expenditure to Aug. 31, 1910..... 17,473.11	Salaries: In Washington..... \$6,350.00 Out of Washington..... 5,000.00 Travel and station and field expenses..... 4,650.00	Salaries: In Washington..... \$10,000.00 Out of Washington..... 5,120.00 Travel and station and field expenses..... 6,660.00
Outstanding liabilities (estimated)..... 469.21		
Balance to be returned to Treasury (estimated)..... 57.68	16,000.00	21,780.00
Total amount of above appropriation..... 18,000.00		
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the office of public roads. This work fell naturally under the following projects:		
PROJECTS.		
(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$1,302.00 Travel expenses..... 373.52	(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$1,200.00 Travel expenses..... 400.00	(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$1,700.00 Travel expenses..... 550.00
	1,600.00	2,250.00
The object-lesson method is designed to introduce standard forms of construction and maintenance throughout the country. The procedure is as follows: Upon request of local authorities, engineers are assigned to make surveys, prepare plans and specifications, and supervise the construction of a short section of road of the materials selected after physical tests made in the laboratory of this office. During the construction the local men are given thorough instruction, so that upon the departure of the Government engineers the road work will go on according to correct methods.		

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## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (road management), \$18,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (road management), \$16,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (road management), \$21,780—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$205.00 After a competitive examination held by the Civil Service Commission, a small number of graduates of engineering schools are appointed to the position of civil engineer student, at a salary of \$60 per month and field expenses. They continue in this position for a period of one year, during which they are given opportunity to acquire practical knowledge of every branch of road work, both in the field and the laboratories. At the end of one year they are retained and promoted to the position of junior highway engineer, or given certificates showing that they have completed a graduate course in highway engineering with this office. The instruction is not gratuitous, as the engineer students render valuable services from the outset. The plan ultimately results in the formation of a trained corps of highway engineers for the Government service, which is also a constant source of supply from which the various States and counties may secure competent men to direct their road work. The project is gradually being amplified by cooperation with engineering schools looking to the introduction of practical courses of instruction in highway engineering.	(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$200.00	(2) Instruction in highway engineering (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$300.00
(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge): (No expenditure on this project under this fund.) This project involves the microscopic and chemical analyses of road materials to determine the relative hardness, toughness, cementing value, and resistance to wear of each sample. These tests are designed to approximate field conditions and make possible an intelligent selection of materials for road building.	(3) Testing road materials (Dr. A. S. Cushman, assistant director, and Mr. Albert T. Goldbeck, testing engineer, in charge): (No expenditure on this project under this fund.)	(3) Testing road materials (Mr. Albert T. Goldbeck, testing engineer, in charge): (No expenditure on this project under this fund.)
(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$3,065.33 Travel expenses..... 88.17 3,153.50 This project involves an investigation of road laws and systems of road management in this and foreign countries, and the preparation of bulletins explaining the State aid and State supervision plan, the county and township systems, needed improvements in road accounting, and various economic questions connected with road building, such as the use of convict labor, traffic regulations, etc.	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$2,400 Travel expenses... 150 2,550.00	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$3,400 Travel expenses... 200 3,600.00
(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge): Salaries..... \$1,998.77 Travel expenses..... 2,827.59 4,826.36 This is not strictly speaking a project within itself for the reason that the office has no employees who may be termed lecturers. There is a constant and increasing demand for representatives of this office to address public meetings, and in many cases assignments are made of such officials or employees as are immediately available. Much practical information and instruction are given in this way, and undoubtedly exert a beneficial influence in directing public sentiment in the best channels.	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge): Salaries..... \$2,000 Travel expenses... 3,000 5,000.00	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge): Salaries..... \$3,000 Travel expenses... 4,000 7,000.00
(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$402.10 Travel expenses..... 575.45 977.55 This project embraces the general advisory work of the office, and most of the preliminary inspection in which experienced engineers determine the character of assistance needed.	(6) Special advice and inspection (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$400 Travel expenses... 600 1,000.00	(6) Special advice and inspection (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$700 Travel expenses... 1,200 1,900.00
(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge): Salaries..... \$256.95 Travel expenses..... 37.05 294.00 In recent years the most important and difficult problem that has engaged the attention of highway engineers is the preservation of macadam roads from the destructive effects of modern motor traffic. This office is conducting experiments with various dust preventatives as palliatives, and with new forms of construction for the purpose of evolving a dustless road.	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge): Salaries..... \$250 Travel expenses... 50 300.00	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge): Salaries..... \$350 Travel expenses... 100 450.00

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Office of Public Roads—Continued.

<div>Detailed expenditures for the fiscal year ended June 30, 1910.</div>	<div>Appropriations for the current fiscal year ending June 30, 1911.</div>	<div>Estimated expenditures for the fiscal year ending June 30, 1912.</div>
<div>General expenses, Office of Public Roads, 1910 (road management), \$18,000—Continued.</div> <div>PROJECTS—continued.</div> <div>(8) Standardization of tests (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>This project, while exceedingly important so far as results are concerned, involves very little expenditure of money. It is designed to perfect as nearly as possible all tests of road materials and to have them adopted as standard, so that uniformity in results may be secured.</div> <div>(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>Under this project engineers are assigned upon request of local authorities to investigate roads, materials, organization, methods of administration, construction, and maintenance, and all features in connection with the road work of a given county, and to prepare an exhaustive report giving full information on all these, and recommendations for the future construction, maintenance, and administration of the roads, the report to be accompanied by plans and estimates where practicable. The purpose is to introduce in certain selected counties in various sections of the country model systems which will serve as object lessons for other counties.</div> <div>(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>The appropriation bill for this office provides specifically for an investigation of road materials in the several States. It is manifest, however, that the appropriation for this office is inadequate to conduct such an investigation on a comprehensive scale. Fortunately, a partial solution of the problem has been devised by a cooperative arrangement with the Geological Survey, whereby the geologists of the survey will cooperate with this office by making field investigations of road materials and securing specimens for transmission to this office. Laboratory tests and such special field work as may be necessary will be done under the direction of this office, and the bulletins will be issued by the Department of Agriculture.</div> <div>(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>Salaries.....\$268.50</div> <div>Travel expenses.....73.58</div> <div>\$342.08</div> <div>The construction of roads by mixing sand and clay in proper proportions and according to certain methods has produced satisfactory roads in many parts of the South. The method is simple, but unfortunately it has not been utilized to the extent which its success warrants. There is reason to believe that the method may be successfully adopted in many of the prairie States, and it is the purpose of this office to conduct experiments with this form of construction and to introduce it wherever it may be successfully employed.</div> <div>(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project during this fiscal year.)</div> <div>In the Delta of the Mississippi, including portions of Arkansas, Louisiana, and Mississippi, very little stone, gravel, sand, or other road-building materials are available. The office was called upon to suggest some method of improvement for this region, and it was decided to try the experiment of burning the clay, or gumbo, upon the road itself. The first experiment, conducted at Clarksdale, Miss., in 1905, proved so successful that roads have been built at Tallulah, La., Greenville, Miss., and other points, and preparations are being made to extend this work.</div>	<div>General expenses, Office of Public Roads, 1911 (road management), \$16,000—Continued.</div> <div>PROJECTS—continued.</div> <div>(8) Standardization of tests (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>Salaries.....\$250</div> <div>Travel expenses.....100</div> <div>\$350.00</div> <div>(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project under this fund.)</div>	<div>General expenses, Office of Public Roads, 1912 (road management), \$21,780—Continued.</div> <div>PROJECTS—continued.</div> <div>(8) Standardization of tests (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):</div> <div>(No expenditure on this project under this fund.)</div> <div>(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>Salaries.....\$350</div> <div>Travel expenses.....150</div> <div>\$500.00</div> <div>(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):</div> <div>(No expenditure on this project under this fund.)</div>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>General expenses, Office of Public Roads, 1910 (road management), \$18,000—Continued.</i></p> <p>PROJECTS—continued.</p> <p>The method of burning the clay is as follows: Transverse ridges 2 feet apart and about 18 inches high are constructed across the surface of the road. On these ridges wood and lumps of gumbo clay are placed in alternate layers to a depth of 3 or 4 feet. Fires are then started in the flues by means of chips, bark, etc., and the clay burned into clinkers. The clay being rich in vegetable matter burns very readily. The clinkers are then broken by knapping hammers and rolled, and the road is ready for traffic.</p> <p>(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.) It has been estimated that some twenty million tons of slag are produced in the various blast-furnaces of this country annually. To a very large extent this by-product would become available for road construction if it possessed the necessary physical properties. Except in a few cases blast-furnace slag does not possess sufficient binding power for use as a road material, but investigations carried on by this office indicate great possibilities in the use of slag in combination with other materials for road building. For instance, by the addition of a certain amount of lime or limestone the binding power is greatly increased. It is also probable that slag in combination with bituminous binders may be successfully employed in the building of roads which would be practically dustless. Exhaustive field tests will be carried on with this material during the fiscal year 1910.</p> <p>(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (Expenditures under this project combined with those of No. 4.)</p> <p>(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge): Salaries..... \$194.45 This investigation was begun for the purpose of determining the cause of corrosion of metal road culverts and to discover, if possible, means of preventing or minimizing the corrosion. The investigation thus far has produced data of great scientific and practical value, which are set forth in publications issued by this office. The results of the work have proved of great benefit to road builders, as several of the rolling mills have entirely changed their methods of manufacture as a result of these investigations, and it is now possible to obtain culverts made of metal which is 99.96 per cent pure iron. This investigation should result in much benefit to the farmers, in view of the great loss which farmers suffer through corrosion of fence wire.</p> <p>(16) Split-log drag (Mr. D. Ward King, expert, in charge): (No expenditure on this project under this fund.) The usefulness of the split-log drag in the maintenance of earth roads is universally acknowledged. In view of the fact that there are approximately 2,000,000 miles of earth roads in the United States, the widest possible introduction of this simple, inexpensive, and exceedingly effective implement should be brought about.</p> <p>(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge): (No expenditure on this project under this fund.) Under this project road materials are classified according to their mineral composition and a study is made of the relationship existing between the mineral composition and the physical properties of road materials.</p> <p>(18) Bibliography on roads: (No expenditure on this project during this fiscal year, as project has previously been completed.)</p> <p>(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; equipment of new building; conduit; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories. Salaries..... \$3,265.34 Miscellaneous..... 1,158.30</p> <p>4,423.64</p>	<p><i>General expenses, Office of Public Roads, 1911 (road management), \$16,000—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)</p> <p>(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (Expenditures under this project combined with those of No. 4.)</p> <p>(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge): (No expenditure on this project under this fund.)</p> <p>(16) Split-log drag (Mr. D. Ward King, expert in charge): (No expenditure on this project under this fund.)</p> <p>(17) Classification of road materials (Dr. E. C. E. Lord, petrographer in charge): (No expenditure on this project under this fund.)</p> <p>(18) Bibliography on roads: (No expenditure on this project during this fiscal year.)</p> <p>(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories. Salaries..... \$3,200.00</p>	<p><i>General expenses, Office of Public Roads, 1912 (road management), \$21,780—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)</p> <p>(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (Expenditures under this project combined with those of No. 4.)</p> <p>(15) Corrosion of iron and steel (Dr. A. S. Cushman, expert, in charge): (No expenditure on this project under this fund.)</p> <p>(16) Split-log drag (Mr. D. Ward King, expert, in charge): (No expenditure on this project under this fund.)</p> <p>(17) Classification of road materials (Dr. E. C. E. Lord, petrographer in charge): (No expenditure on this project under this fund.)</p> <p>(18) Bibliography on roads: (No expenditure on this project during this fiscal year.)</p> <p>(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories. Salaries..... \$3,240.00</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (road management), \$18,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (road management), \$16,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (road management), \$21,780—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): (No expenditure on this project under this fund.) Under this project it is the purpose of the office to conduct tests to determine the comparative effect of various widths of tire, various grades, and road surfaces on tractive resistance. In September, 1908, a number of such tests were conducted at Memphis, Tenn., in cooperation with the Tri-State Fair Association then holding a fair at that place, and later tests were conducted at Manhattan, Kans., in cooperation with the State Agricultural College. These tests will be continued during the coming fiscal years.	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): (No expenditure on this project under this fund.)	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): (No expenditure on this project under this fund.)
(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.) The Fourth Assistant Postmaster General notifies this office, from time to time, of rural delivery roads in bad state of repair. The office thereupon tenders to the local authorities having jurisdiction the services of an engineer to inspect the road and give advice and instruction for its repair and maintenance. This project works to the advantage of all parties concerned, and does not in any way infringe upon the authority of local officials.	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)
(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries..... \$626.67 This is not a project in itself, the photographs, lantern slides, bromide enlargements, and other illustrative work being used in connection with the lectures, papers, and general educational work of the office. It is deemed advisable, however, to state the expenditures as a separate item.	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries..... \$600.00	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries..... \$850.00
(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project during this fiscal year.) In order to carry out the provisions of the appropriation bill directing cooperation with experiment stations, a representative of this office visited various stations to confer with the officials as to the best means for carrying out cooperative work.	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)
(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project during this fiscal year.) This project comprises cooperation with the Forest Service in devising and locating systems of roads and trails through national forests.	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): (No expenditure on this project under this fund.)
(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... 49.00 In this project it is the purpose of the office to prepare standard plans for the smaller culverts and bridges which have in the past been constructed largely of timber, tile, or in many instances left merely as fords; also to test foundations for bridges of sizes that require such tests to be made and to provide a small number of engineers experienced in this class of work to advise with local officials and to superintend the construction of the smaller concrete structures, concerning which there is at the present time little available information in suitable form for distribution. It is also proposed to issue one or two bulletins on the subject of highway bridges and culverts.	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... 50.00	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... 100.00
(26) Bulletins (Mr. L. W. Page, director, in charge): Salaries..... 60.00 This covers a sand-clay bulletin for the Middle West and a bulletin on road materials in Minnesota. In subsequent reports this project will be discontinued, being charged to other projects according to subject matter.	(26) Bulletins (Mr. L. W. Page, director, in charge): (No expenditure on this project during this fiscal year.)	(26) Bulletins (Mr. L. W. Page, director, in charge): (No expenditure on this project during this fiscal year.)
(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$504.46 Travel expenses..... 146.13 650.59 The purpose of this project is to determine the relation between roads and agriculture and the relative effects of good and bad roads upon land values, amount and character of production, cost of hauling, school attendance, rural delivery, population, etc., and to obtain data on the financing of road improvement, including bond issues, increase in tax rates, statute labor, etc. Typical and exceptional counties are chosen after investigation, which is made partly by correspondence and partly by personal visits of representatives of this office.	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$500.00 Travel expenses.. 150.00 650.00	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$700.00 Travel expenses.. 200.00 900.00

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<p><i>General expenses, Office of Public Roads, 1910 (road management), \$18,000—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(28) Oil-concrete investigations (Mr. L. W. Page, director, in charge):</p> <p>Salaries..... \$203.45</p> <p>Travel expenses..... 13.60</p> <p>\$217.05</p> <p>An investigation of the properties of concrete, of various proportions, in which nonvolatile oils are incorporated during the process of mixing. The aim is to secure a dense, impermeable concrete. The laboratory tests include investigations of compressive strength, elastic properties, permeability, absorption, toughness, bond, and reinforced concrete beams. Service tests are being conducted on oil concrete roads, tanks, vaults, etc.</p> <p>(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$196.00</p> <p>Travel expenses..... 50.91</p> <p>246.91</p> <p>Under this heading falls one of the most valuable and important divisions of highway work. Hundreds of counties during past years have presented the question of bond issue to their voters without preliminary surveys by experienced men who know the best types of construction, what materials are best adapted to local conditions, and the cost of the various types of construction. It is not intended under this branch of the work to make detailed or expensive surveys in all instances, but to make such preliminary reconnaissance surveys as will give the county officials some definite information upon which to base the amount of their bond issue. An instance of this is a survey recently made from San Antonio to Corpus Christi, Tex., a distance of 150 miles, which has resulted in detailed construction work being taken up on an intelligent basis along this route.</p> <p>Total of appropriation for "General expenses, Office of Public Roads, 1910" (road management)..... 18,000.00</p> <p>Total expenditures to Aug. 31, 1910..... 17,473.11</p> <p>Outstanding liabilities (estimated)..... 469.21</p> <p>Balance to be returned to Treasury (estimated).... 57.68</p> <p><i>General expenses, Office of Public Roads, 1910 (investigating road building and maintenance), \$34,000.</i></p> <p>Salaries:</p> <p>In Washington..... \$7,987.81</p> <p>Out of Washington..... 15,094.45</p> <p>Stationery..... 27.60</p> <p>Miscellaneous supplies and services, equipment, books, machinery, etc..... 374.53</p> <p>Furniture..... 260.02</p> <p>Express..... 10.38</p> <p>Apparatus, instruments, and laboratory material..... 113.60</p> <p>Travel and station and field expenses..... 7,543.80</p> <p>Total expenditure to Aug. 31, 1910..... 31,412.19</p> <p>Repayments to credit of appropriation..... 2.10</p> <p>31,410.09</p> <p>Outstanding liabilities (estimated)..... 2,575.41</p> <p>Balance to be returned to Treasury (estimated).... 14.50</p> <p>Total amount of above appropriation..... 34,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Office of Public Roads. This work fell naturally under the following projects:</p> <p>PROJECTS.</p> <p>(See explanations of projects under "Road management.")</p> <p>(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$9,503.04</p> <p>Travel expenses..... 1,713.20</p> <p>11,216.24</p>	<p><i>General expenses, Office of Public Roads, 1911 (road management), \$16,000—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(28) Oil-concrete investigations (Mr. L. W. Page, director, in charge):</p> <p>Salaries..... \$200.00</p> <p>Travel expenses..... 50.00</p> <p>\$250.00</p> <p>(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$100.00</p> <p>Travel expenses..... 150.00</p> <p>250.00</p> <p>Total of appropriation for "General expenses, Office of Public Roads, 1911" (road management) (a decrease from 1910 of \$2,000)..... 16,000.00</p> <p><i>General expenses, Office of Public Roads, 1911 (investigating road building and maintenance), \$43,000.</i></p> <p>Salaries:</p> <p>In Washington..... \$10,280.00</p> <p>Out of Washington..... 20,570.00</p> <p>Travel and station and field expenses..... 12,150.00</p> <p>43,000.00</p> <p>NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Office of Public Roads. This work falls naturally under the following projects:</p> <p>PROJECTS.</p> <p>(See explanations of projects under "Road management.")</p> <p>(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$13,000.00</p> <p>Travel expenses..... 3,000.00</p> <p>16,000.00</p>	<p><i>General expenses, Office of Public Roads, 1912 (road management), \$21,780—Continued.</i></p> <p>PROJECTS—continued.</p> <p>(28) Oil-concrete investigations (Mr. L. W. Page, director, in charge):</p> <p>Salaries..... \$280.00</p> <p>Travel expenses..... 60.00</p> <p>\$340.00</p> <p>(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$150.00</p> <p>Travel expenses..... 200.00</p> <p>350.00</p> <p>Total of appropriation for "General expenses, Office of Public Roads, 1912" (road management) (an increase over 1911 of \$5,780)..... 21,780.00</p> <p><i>General expenses, Office of Public Roads, 1912, (investigating road building and maintenance), \$60,000.</i></p> <p>Salaries:</p> <p>In Washington..... \$13,980.00</p> <p>Out of Washington..... 27,970.00</p> <p>Travel and station and field expenses..... 18,050.00</p> <p>60,000.00</p> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Office of Public Roads. This work will fall naturally under the following projects:</p> <p>PROJECTS.</p> <p>(See explanations of projects under "Road management.")</p> <p>(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):</p> <p>Salaries..... \$17,000.00</p> <p>Travel expenses..... 5,000.00</p> <p>22,000.00</p>

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (investigating road building and maintenance), \$34,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (investigating road building and maintenance), \$43,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (investigating road building and maintenance), \$60,000—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(2) Instruction in highway engineering (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$1,927.00	Salaries..... \$2,100.00	Salaries..... \$2,800.00
Travel expenses..... 746.22	Travel expenses..... 900.00	Travel expenses..... 1,200.00
\$2,691.22	\$3,000.00	\$4,000.00
(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):	(3) Testing road materials (Dr. A. S. Cushman, assistant director, and Mr. Albert T. Goldbeck, testing engineer, in charge):	(3) Testing road materials (Mr. Albert T. Goldbeck, testing engineer, in charge):
Salaries..... 210.55	Salaries..... \$500.00	Salaries..... \$700.00
	Travel expenses..... 200.00	Travel expenses..... 300.00
	700.00	1,000.00
(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge):	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge):	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge):
Salaries..... 673.20	Salaries..... 400.00	Salaries..... 600.00
(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):
Salaries..... \$1,003.43	Salaries..... \$1,200.00	Salaries..... \$1,600.00
Travel expenses..... 1,103.39	Travel expenses..... 1,800.00	Travel expenses..... 2,400.00
2,106.82	3,000.00	4,000.00
(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(6) Special advice and inspection (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$2,558.31	Salaries..... \$3,000.00	Salaries..... \$4,200.00
Travel expenses..... 2,043.64	Travel expenses..... 2,600.00	Travel expenses..... 4,000.00
4,601.95	5,600.00	8,200.00
(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):
Salaries..... \$1,739.78	Salaries..... \$2,800.00	Salaries..... \$4,400.00
Travel expenses..... 293.31	Travel expenses..... 400.00	Travel expenses..... 700.00
2,033.09	3,200.00	5,100.00
(8) Standardization of tests (Mr. L. W. Page, director, in charge):	(8) Standardization of tests (Mr. L. W. Page, director, in charge):	(8) Standardization of tests (Mr. L. W. Page, director, in charge):
Salaries..... 63.33	Salaries..... 65.00	Salaries..... 100.00
(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, in charge):	(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, in charge):
Salaries..... \$1,059.17	Salaries..... \$1,700.00	Salaries..... \$2,500.00
Travel expenses..... 278.85	Travel expenses..... 700.00	Travel expenses..... 900.00
1,338.02	2,400.00	3,400.00
(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):	(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):	(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge):
Salaries..... \$433.82	Salaries..... \$400.00	Salaries..... \$600.00
Travel expenses..... 543.94	Travel expenses..... 550.00	Travel expenses..... 800.00
977.76	950.00	1,400.00
(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$2,077.32	Salaries..... \$2,500.00	Salaries..... \$3,300.00
Travel expenses..... 409.44	Travel expenses..... 500.00	Travel expenses..... 900.00
2,486.76	3,000.00	4,200.00
(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
	Salaries..... \$50.00	Salaries..... \$50.00
	Travel expenses..... 50.00	Travel expenses..... 100.00
	100.00	150.00
(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(13) Investigation of slag (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$65.28	Salaries..... \$50.00	Salaries..... \$100.00
Travel expenses..... 22.00	Travel expenses..... 50.00	Travel expenses..... 50.00
87.28	100.00	150.00
(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)	(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)	(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)
(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge):	(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge). (No expenditure on this project under this fund.)	(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge). (No expenditure on this project under this fund.)
Salaries..... 65.55		
(16) Split-log drag (Mr. D. Ward King, expert, in charge):	(16) Split-log drag (Mr. D. Ward King, expert, in charge):	(16) Split-log drag (Mr. D. Ward King, expert, in charge):
Salaries..... \$19.00	Salaries..... 25.00	Salaries..... 30.00
Travel expenses..... 2.90		
21.90		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (investigating road building and maintenance), \$34,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (investigating road building and maintenance), \$43,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (investigating road building and maintenance), \$60,000—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge): Salaries.....	(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge): Salaries.....	(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge): Salaries.....
\$58.33	\$60.00	\$100.00
(18) Bibliography on roads. (No expenditure on this project during this fiscal year, as project has previously been completed.)	(18) Bibliography on roads. (No expenditure on this project during this fiscal year.)	(18) Bibliography on roads. (No expenditure on this project during this fiscal year.)
(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; equipment of new building; conduit; expendable supplies, and contingent expenses for maintenance and operation of offices and laboratories.	(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendable supplies, and contingent expenses for maintenance and operation of offices and laboratories.	(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendable supplies, and contingent expenses for maintenance and operation of offices and laboratories.
Salaries.....\$534.00 Miscellaneous.....3,223.30	Salaries.....500.00	Salaries.....700.00
3,757.30		
(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): Salaries.....\$6.94 Travel expenses.....23.15	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): Salaries.....50.00	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): Salaries.....70.00
30.09		
(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$34.00 Travel expenses.....91.11	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$50.00 Travel expenses.....100.00	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$50.00 Travel expenses.....150.00
125.11	150.00	200.00
(22) Illustrated lecture, photographic and record work (Mr. Edward Block, photographer, in charge). (No expenditure on this project under this fund.)	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries.....\$400.00 Travel expenses.....100.00	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries.....\$600.00 Travel expenses.....100.00
	500.00	700.00
(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$50.00 Travel expenses.....50.00	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$100.00 Travel expenses.....50.00
	100.00	150.00
(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$50.00 Travel expenses.....50.00	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$100.00 Travel expenses.....50.00
	100.00	150.00
(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$126.00 Travel expenses.....34.02	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$1,200.00 Travel expenses.....400.00	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$1,250.00 Travel expenses.....450.00
160.02	1,600.00	1,700.00
(26) Bulletins (Mr. L. W. Page, director, in charge): Salaries.....\$223.52 Travel expenses.....141.16	(26) Bulletins (Mr. L. W. Page, director, in charge). (No expenditure on this project during this fiscal year.)	(26) Bulletins (Mr. L. W. Page, director, in charge). (No expenditure on this project during this fiscal year.)
364.68		
(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries.....\$135.00 Travel expenses.....216.18	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries.....\$200.00 Travel expenses.....400.00	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries.....\$300.00 Travel expenses.....500.00
351.18	600.00	800.00
(28) Oil concrete investigations (Mr. L. W. Page, director, in charge): Salaries.....	(28) Oil concrete investigations (Mr. L. W. Page, director, in charge): Salaries.....\$100.00 Travel expenses.....100.00	(28) Oil concrete investigations (Mr. L. W. Page, director, in charge): Salaries.....\$200.00 Travel expenses.....100.00
32.22	200.00	300.00
(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$343.45 Travel expenses.....189.45	(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$400.00 Travel expenses.....200.00	(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries.....\$500.00 Travel expenses.....300.00
532.90	600.00	800.00
Total of appropriation for "General expenses, Office of Public Roads, 1910" (investigating road building and maintenance).....	Total of appropriation for "General expenses, Office of Public Roads, 1911" (investigating road building and maintenance) (an increase over 1910 of \$9,000).....	Total of appropriation for "General expenses, Office of Public Roads, 1912" (investigating road building and maintenance) (an increase over 1911 of \$17,000).....
34,000.00	43,000.00	60,000.00
Total expenditure to Aug. 31, 1910.....		
31,412.19		
Repayments to credit of appropriation.....		
2.10		
Outstanding liabilities (estimated).....		
31,410.09		
Balance to be returned to Treasury (estimated).....		
2,575.41		
14.50		

## 228 EXPENDITURES, APPROPRIATIONS, AND ESTIMATES, DEPARTMENT OF AGRICULTURE.

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (road material), \$25,900.</i>	<i>General expenses, Office of Public Roads, 1911 (road material), \$23,280.</i>	<i>General expenses, Office of Public Roads, 1912 (road material), \$28,360.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$12,397.33	In Washington..... \$14,460.00	In Washington..... \$17,445.00
Out of Washington..... 3,276.20	Out of Washington..... 4,820.00	Out of Washington..... 5,815.09
Stationery..... 18.21	Travel and station and field expenses..... 4,000.00	Travel and station and field expenses..... 5,100.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 2,673.53		
Furniture..... 287.90		
Freight..... 384.56		
Express..... 359.24		
Apparatus, instruments, and laboratory material..... 887.39		
Travel and station and field expenses..... 2,386.49		
Total expenditure to Aug. 31, 1910..... 22,670.85		
Outstanding liabilities (estimated)..... 2,312.34		
Balance to be returned to Treasury (estimated)..... 16.81		
Total amount of above appropriation..... 25,000.00	23,280.00	28,360.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Office of Public Roads. This work fell naturally under the following projects:	NOTE.—The above expenditure, classified in accordance with the suggestion of the congressional committee on expenditures for this department, are being incurred in prosecuting the important work of the Office of Public Roads. This work falls naturally under the following projects:	NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Office of Public Roads. This work will fall naturally under the following projects:
PROJECTS.	PROJECTS.	PROJECTS.
(See explanations of projects under "Road management.")	(See explanations of projects under "Road management.")	(See explanations of projects under "Road management.")
(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$1,580.74	Salaries..... \$3,000.00	Salaries..... \$3,600.00
Travel expenses..... 169.46	Travel expenses..... 500.00	Travel expenses..... 650.00
1,750.20	3,500.00	4,250.00
(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(2) Instruction in highway engineering (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$1,172.00	Salaries..... \$1,200.00	Salaries..... \$1,400.00
Travel expenses..... 297.80	Travel expenses..... 300.00	Travel expenses..... 400.00
1,469.80	1,500.00	1,800.00
(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):	(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):	(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):
Salaries..... 3,724.44	Salaries..... 3,900.00	Salaries..... 4,800.00
(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (No expenditure on this project under this fund.)	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (No expenditure on this project under this fund.)	(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge): (No expenditure on this project under this fund.)
(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):
Salaries..... \$300.66	Salaries..... \$500.00	Salaries..... \$550.00
Travel expenses..... 307.32	Travel expenses..... 600.00	Travel expenses..... 650.00
607.98	1,100.00	1,200.00
(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(6) Special advice and inspection (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$302.45	Salaries..... \$800.00	Salaries..... \$900.00
Travel expenses..... 397.25	Travel expenses..... 900.00	Travel expenses..... 1,100.00
699.70	1,700.00	2,000.00
(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):	(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):
Salaries..... \$3,212.37	Salaries..... \$4,000.00	Salaries..... \$4,800.00
Travel expenses..... 637.19	Travel expenses..... 850.00	Travel expenses..... 1,100.00
3,849.56	4,850.00	5,900.00
(8) Standardization of tests (Mr. L. W. Page, director, in charge):	(8) Standardization of tests (Mr. L. W. Page, director, in charge):	(8) Standardization of tests (Mr. L. W. Page, director, in charge):
Salaries..... 225.00	Salaries..... 230.00	Salaries..... 460.00
(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)
(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge). (No expenditure on this project under this fund.)	(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge). (No expenditure on this project under this fund.)	(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge). (No expenditure on this project under this fund.)

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (road material), \$25,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (road material), \$23,280—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (road material), \$23,360—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$264.00	Salaries..... \$400.00	Salaries..... \$450.00
Travel expenses..... 45.98	Travel expenses..... 100.00	Travel expenses..... 150.00
	\$500.00	\$600.00
(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):	(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
	Salaries..... \$100.00	Salaries..... \$100.00
	Travel expenses..... 100.00	Travel expenses..... 100.00
	200.00	200.00
(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):	(13) Investigation of slag (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... \$776.66	Salaries..... \$800.00	Salaries..... \$1,100.00
Travel expenses..... 138.42	Travel expenses..... 200.00	Travel expenses..... 300.00
	1,000.00	1,400.00
(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)	(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)	(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge). (Expenditures under this project combined with those of No. 4.)
(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge):	(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge):	(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge):
Salaries..... \$1,459.45	Salaries..... \$450.00	Salaries..... \$550.00
Travel expenses..... 96.80	Travel expenses..... 50.00	Travel expenses..... 50.00
	500.00	600.00
(16) Split-log drag (Mr. D. Ward King, expert, in charge). (No expenditure on this project under this fund.)	(16) Split-log drag (Mr. D. Ward King, expert, in charge). (No expenditure on this project under this fund.)	(16) Split-log drag (Mr. D. Ward King, expert, in charge). (No expenditure on this project under this fund.)
(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge):	(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge):	(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge):
Salaries..... 641.67	Salaries..... 650.00	Salaries..... 750.00
(18) Bibliography on roads. (No expenditure on this project during this fiscal year, as project has previously been completed.)	(18) Bibliography on roads. (No expenditure on this project during this fiscal year.)	(18) Bibliography on roads. (No expenditure on this project during this fiscal year.)
(19) Administration and equipment, including: Rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; equipment of new building; conduit; expendable supplies; and contingent expenses for maintenance and operation of offices and laboratories.	(19) Administration and equipment, including: Rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendable supplies; and contingent expenses for maintenance and operation of offices and laboratories.	(19) Administration and equipment, including: Rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendable supplies; and contingent expenses for maintenance and operation of offices and laboratories.
Salaries..... \$774.67	Salaries..... 2,000.00	Salaries..... 2,000.00
Miscellaneous..... 7,298.36		
(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge):	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge). (No expenditure on this project under this fund.)	(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge). (No expenditure on this project under this fund.)
Salaries..... 296.00		
(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)
(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge). (No expenditure on this project under this fund.)	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge):	(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge):
	Salaries..... 500.00	Salaries..... 600.00
(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)
(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project during this fiscal year.)	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)
(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge):	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge):	(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge):
Salaries..... 130.00	Salaries..... 150.00	Salaries..... 200.00
(26) Bulletins (Mr. L. W. Page, director, in charge). (No expenditure on this project under this fund.)	(26) Bulletins (Mr. L. W. Page, director, in charge). (No expenditure on this project during this fiscal year.)	(26) Bulletins (Mr. L. W. Page, director, in charge). (No expenditure on this project during this fiscal year.)
(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge):	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge):	(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge):
Salaries..... \$133.33	Salaries..... \$200.00	Salaries..... \$300.00
Travel expenses..... 224.76	Travel expenses..... 300.00	Travel expenses..... 400.00
	500.00	700.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (road material), \$25,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (road material), \$23,280—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (road material), \$28,360—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(28) Oil concrete investigations (Mr. L. W. Page, director, in charge):	(28) Oil concrete investigations (Mr. L. W. Page, director, in charge):	(28) Oil concrete investigations (Mr. L. W. Page, director, in charge):
Salaries..... \$301.11	Salaries..... \$400.00	Salaries..... \$700.00
Travel expenses..... 75.30	Travel expenses..... 100.00	Travel expenses..... 200.00
	\$500.00	\$900.00
(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)	(29) Surveys (Mr. Vernon M. Peirce, chief engineer in charge). (No expenditure on this project under this fund.)	(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge). (No expenditure on this project under this fund.)
Total of appropriation for "General expenses, Office of Public Roads, 1910" (road material)..... 25,000.00	Total of appropriation for "General expenses, Office of Public Roads, 1911" (road material) (a decrease from 1910 of \$1,720)..... 23,280.00	Total of appropriation for "General expenses, Office of Public Roads, 1912" (road material) (an increase over 1911 of \$5,080)..... 28,360.00
Total expenditure to Aug. 31, 1910..... 22,670.85		
Outstanding liabilities (estimated)..... 2,312.34		
Balance to be returned to Treasury (estimated)..... 16.81		
<i>General expenses, Office of Public Roads, 1910 (reports of investigations), \$23,000.</i>	<i>General expenses, Office of Public Roads, 1911 (administrative expenses), \$10,700.</i>	<i>General expenses, Office of Public Roads, 1912 (administrative expenses), \$10,700.</i>
Salaries:	Salaries:	Salaries:
In Washington..... \$2,465.72	In Washington..... \$500.00	In Washington..... \$600.00
Out of Washington..... 2,943.00	Out of Washington..... 1,500.00	Out of Washington..... 1,700.00
Stationery..... 1,454.06	Stationery..... 1,500.00	Stationery..... 1,700.00
Miscellaneous supplies and services, equipment, books, machinery, etc..... 5,459.95	Miscellaneous supplies and services, equipment, books, machinery, etc..... 1,800.00	Miscellaneous supplies and services, equipment, books, machinery, etc..... 2,100.00
Furniture..... 931.40	Furniture..... 750.00	Furniture..... 850.00
Freight..... 360.31	Freight..... 400.00	Freight..... 500.00
Telegraph..... 167.48	Express..... 200.00	Express..... 200.00
Telephone..... 59.77	Telegraph..... 250.00	Telegraph..... 300.00
Rent..... 1,333.32	Telephone..... 250.00	Telephone..... 300.00
Apparatus, instruments, and laboratory material..... 3,030.77	Rent..... 3,500.00	Rent..... 3,500.00
Travel and station and field expenses..... 1,443.00	Apparatus, instruments, and laboratory material..... 1,550.00	Apparatus, instruments, and laboratory material..... 1,650.00
Total expenditure to Aug. 31, 1910..... 19,648.78		
Outstanding liabilities (estimated)..... 3,329.43		
Balance to be returned to Treasury (estimated)..... 21.79		
Total amount of above appropriation..... 23,000.00	Total amount of appropriation..... 10,700.00	Total amount of appropriation (an increase over 1911 of \$1,000).... 11,700.00
NOTE.—The above expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, were necessary in prosecuting the important work of the Office of Public Roads. This work fell naturally under the following projects:		
PROJECTS.		
(See explanations of projects under "Road management.")		
(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):		
Salaries..... \$1,797.01		
Travel expenses..... 231.87		
	2,028.88	
(2) Instruction in highway engineering (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):		
(No expenditure on this project under this fund.)		
(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):		
(No expenditure on this project under this fund.)		
(4) Road management and accounting (Mr. J. E. Pennybacker, jr., chief of road management, in charge):		
Salaries..... \$102.00		
Travel expenses..... 102.00		
	102.00	
(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):		
Salaries..... \$68.78		
Travel expenses..... 74.69		
	143.47	
(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):		
Salaries..... \$634.33		
Travel expenses..... 494.33		
	1,128.66	
(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):		
Salaries..... 33.70		

*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
<i>General expenses, Office of Public Roads, 1910 (reports of investigations), \$23,000—Continued.</i>	<i>General expenses, Office of Public Roads, 1911 (administrative expenses), \$10,700—Continued.</i>	<i>General expenses, Office of Public Roads, 1912 (administrative expenses), \$10,700—Continued.</i>
PROJECTS—continued.	PROJECTS—continued.	PROJECTS—continued.
(8) Standardization of tests (Mr. L. W. Page, director, in charge): No expenditure on this project under this fund.		
(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project under this fund.		
(10) Investigation of road materials in the several States (Mr. L. W. Page, director, in charge): No expenditure on this project under this fund.		
(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... \$857.66 Travel expenses..... 194.06		
\$1,051.72		
(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project during this fiscal year.		
(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project under this fund.		
(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Expenditures under this project combined with those of No. 4.		
(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge): Salaries..... 33.70		
(16) Split-log drag (Mr. D. Ward King, expert, in charge): No expenditure on this project under this fund.		
(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge): No expenditure on this project under this fund.		
(18) Bibliography on Roads. No expenditure on this project during this fiscal year, as project has previously been completed.		
(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; equipment of new building; conduit; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories: Salaries..... \$1,200.00 Miscellaneous..... 16,089.56	(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories: Salaries..... \$500.00 Miscellaneous..... 10,200.00	(19) Administration and equipment, including rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendible supplies; and contingent expenses for maintenance and operation of offices and laboratories: Salaries..... \$600.00 Miscellaneous..... 11,100.00
17,289.56	\$10,700.00	\$11,700.00
(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge): No expenditure on this project under this fund.		
(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project under this fund.		
(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge): Salaries..... \$520.82 Travel expenses..... 438.80		
959.62		
(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project during this fiscal year.		
(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project during this fiscal year.		
(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge): Salaries..... 36.00		
(26) Bulletins (Mr. L. W. Page, director, in charge): Salaries..... \$49.00 Travel expenses..... 46.20		
95.20		
(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): No expenditure on this project under this fund.		
(28) Oil concrete investigations (Mr. L. W. Page, director, in charge): Salaries..... 75.70		
(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project under this fund.		
Total of appropriation for "General expenses, Office of Public Roads, 1910" (reports of investigations)..... 23,000.00	Total of appropriation for "General expenses, Office of Public Roads, 1911" (administrative expenses)..... 10,700.00	Total of appropriation for "General expenses, Office of Public Roads, 1912" (administrative expenses) (an increase over 1911 of \$1,000) ... 11,700.00
Total expenditure to August 31, 1910..... 19,648.78		
Outstanding liabilities (estimated)..... 3,329.43		
Balance to be returned to Treasury (estimated)..... 21.79		

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.																																																										
<p>There was no appropriation for "Experimental work" for the fiscal year 1910.</p>	<p>There is no appropriation for "Experimental work" for the fiscal year 1910.</p>	<p><i>General expenses, Office of Public Roads, 1912 (experimental work), \$10,000.</i></p> <table><tr><td>Salaries:</td><td></td></tr><tr><td>    In Washington.....</td><td>\$3,200. 00</td></tr><tr><td>    Out of Washington.....</td><td></td></tr><tr><td>Miscellaneous.....</td><td>6,800. 00</td></tr><tr><td></td><td>10,000. 00</td></tr></table> <p>NOTE.—The above estimates of expenditures, classified in accordance with the suggestion of the congressional committee on expenditures for this department, have been submitted as necessary for prosecuting the important work of the Office of Public Roads. In the past the office has conducted its experimental work under many disadvantages. It has been necessary to secure the cooperation of local authorities and private interests. When this is done, there is often unnecessary delay, a lack of adequate equipment, and after the work has been done by the office, and left to the care of local people, it suffers for want of proper care and attention, unsatisfactory conditions in general are the result, and the usefulness of the work is very greatly lessened. This work will fall naturally under the following projects:</p> <p>PROJECTS.</p> <p>(See explanations of projects under road management.)</p> <table><tr><td>(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):</td><td></td></tr><tr><td>    Miscellaneous.....</td><td>100. 00</td></tr><tr><td>(2) Instruction in highway engineering (Mr. Vernon M. Peirce, chief engineer, in charge):</td><td></td></tr><tr><td>    Salaries.....</td><td>300. 00</td></tr><tr><td>(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):</td><td></td></tr><tr><td>    Salaries.....</td><td>300. 00</td></tr><tr><td>    Miscellaneous.....</td><td>200. 00</td></tr><tr><td></td><td>500. 00</td></tr><tr><td>(4) Road management and accounting (Mr. J. E. Pennybacker, Jr., chief of road management, in charge):</td><td></td></tr><tr><td>    Salaries.....</td><td>100. 00</td></tr><tr><td>(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):</td><td></td></tr><tr><td>    No expenditure on this project under this fund.</td><td></td></tr><tr><td>(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):</td><td></td></tr><tr><td>    No expenditure on this project under this fund.</td><td></td></tr><tr><td>(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):</td><td></td></tr><tr><td>    Salaries.....</td><td>\$1,000. 00</td></tr><tr><td>    Miscellaneous.....</td><td>1,000. 00</td></tr><tr><td></td><td>2,000. 00</td></tr><tr><td>(8) Standardization of tests (Mr. L. W. Page, director, in charge):</td><td></td></tr><tr><td>    No expenditure on this project under this fund.</td><td></td></tr><tr><td>(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):</td><td></td></tr><tr><td>    No expenditure on this project under this fund.</td><td></td></tr><tr><td>(10) Investigation of road materials in the several States (Mr. L. W. Page, director in charge):</td><td></td></tr><tr><td>    No expenditure on this project under this fund.</td><td></td></tr></table>	Salaries:		In Washington.....	\$3,200. 00	Out of Washington.....		Miscellaneous.....	6,800. 00		10,000. 00	(1) Object-lesson roads (Mr. Vernon M. Peirce, chief engineer, in charge):		Miscellaneous.....	100. 00	(2) Instruction in highway engineering (Mr. Vernon M. Peirce, chief engineer, in charge):		Salaries.....	300. 00	(3) Testing road materials (Dr. A. S. Cushman, assistant director, in charge):		Salaries.....	300. 00	Miscellaneous.....	200. 00		500. 00	(4) Road management and accounting (Mr. J. E. Pennybacker, Jr., chief of road management, in charge):		Salaries.....	100. 00	(5) Lectures, addresses, and papers (Mr. L. W. Page, director, in charge):		No expenditure on this project under this fund.		(6) Special advice and inspection (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):		No expenditure on this project under this fund.		(7) Dust prevention and road preservation (Mr. L. W. Page, director, in charge):		Salaries.....	\$1,000. 00	Miscellaneous.....	1,000. 00		2,000. 00	(8) Standardization of tests (Mr. L. W. Page, director, in charge):		No expenditure on this project under this fund.		(9) Introduction of model systems of construction, maintenance, and administration (Mr. L. W. Page, director, and Mr. Vernon M. Peirce, chief engineer, in charge):		No expenditure on this project under this fund.		(10) Investigation of road materials in the several States (Mr. L. W. Page, director in charge):		No expenditure on this project under this fund.	
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*Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.*

## Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
		<i>General expenses, Office of Public Roads, 1912, (experimental work), \$10,000—Continued.</i>
		PROJECTS—continued.
		(11) Sand-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
		Salaries..... \$50.00
		Miscellaneous..... 100.00
		\$150.00
		(12) Burnt-clay roads (Mr. Vernon M. Peirce, chief engineer, in charge):
		Salaries..... \$50.00
		Miscellaneous..... 100.00
		150.00
		(13) Investigation of slag (Dr. A. S. Cushman, assistant director, and Mr. Vernon M. Peirce, chief engineer, in charge):
		Salaries..... \$400.00
		Miscellaneous..... 800.00
		1,200.00
		(14) Cooperation with county newspapers (Mr. J. E. Pennybacker, jr., chief of road management, in charge):
		No expenditure on this project under this fund.
		(15) Corrosion of iron and steel (Dr. A. S. Cushman, assistant director, in charge):
		Salaries..... \$100.00
		Miscellaneous..... 200.00
		300.00
		(16) Split-log drag (Mr. D. Ward King, expert, in charge):
		Salaries..... \$50.00
		Miscellaneous..... 150.00
		200.00
		(17) Classification of road materials (Dr. E. C. E. Lord, petrographer, in charge):
		No expenditure on this project under this fund.
		(18) Bibliography on roads.
		No expenditure on this project under this fund.
		(19) Administration and equipment, including: rent of office; field, laboratory, and office equipment; hire of clerks, messengers, laborers, etc., on lump sum in Washington; expendible supplies, and contingent expenses for maintenance and operation of offices and laboratories:
		Salaries..... \$100.00
		Miscellaneous..... 2,900.00
		3,000.00
		(20) Traction tests (Prof. E. B. McCormick, consulting engineer, in charge):
		No expenditure on this project under this fund.
		(21) Inspection of rural delivery roads (Mr. Vernon M. Peirce, chief engineer, in charge):
		No expenditure on this project under this fund.
		(22) Illustrated lecture, photographic, and record work (Mr. Edward Block, photographer, in charge):
		Salaries..... \$50.00
		Miscellaneous..... 150.00
		200.00
		(23) Cooperation with experiment stations (Mr. Vernon M. Peirce, chief engineer, in charge):
		No expenditure on this project under this fund.
		(24) Cooperation with Forest Service (Mr. Vernon M. Peirce, chief engineer, in charge):
		No expenditure on this project under this fund.
		(25) Bridge investigations (Mr. Vernon M. Peirce, chief engineer, in charge):
		Salaries..... \$100.00
		Miscellaneous..... 400.00
		500.00

Classified and detailed estimates of every subject of expenditure intended for the Department of Agriculture for the fiscal year ending June 30, 1912, and detailed reports of all expenditures under any appropriation for such service during the fiscal year ended June 30, 1910 (34 Stats., p. 1282); to which, for purposes of ready comparison, has been added, in parallel columns, a detailed statement of the appropriations being expended for the department during the current fiscal year ending June 30, 1911—Continued.

Office of Public Roads—Continued.

Detailed expenditures for the fiscal year ended June 30, 1910.	Appropriations for the current fiscal year ending June 30, 1911.	Estimated expenditures for the fiscal year ending June 30, 1912.
		General expenses, Office of Public Roads, 1912 (experimental work), \$10,000—Continued.
		PROJECTS—continued.
		(26) Bulletins (Mr. L. W. Page, director, in charge): No expenditure on this project under this fund.
		(27) Economic investigations (Mr. J. E. Pennybacker, jr., chief of road management, in charge): Salaries..... \$500.00 Miscellaneous..... 100.00
		\$600.00
		(28) Oil concrete investigations (Mr. L. W. Page, director, in charge): Salaries..... \$100.00 Miscellaneous..... 600.00
		700.00
		(29) Surveys (Mr. Vernon M. Peirce, chief engineer, in charge): No expenditure on this project under this fund.
		Total of appropriation for "General expenses, Office of Public Roads, 1912" (experimental work)..... 10,000.00
		Total amount estimated for general expenses, Office of Public Roads, including all foregoing subappropriations (an increase over 1911 of \$38,860)..... 131,840.00
		Total amount estimated for Office of Public Roads (an increase over 1911 of \$51,660)..... 165,900.00
Total appropriation for general expenses, Office of Public Roads, including all foregoing subappropriations.....	Total appropriation for general expenses, Office of Public Roads, including all foregoing subappropriations (a decrease from 1910 of \$7,020)..... \$92,980.00	
	Total of all appropriations for Office of Public Roads (a decrease from 1910 of \$2,220)..... 114,240.00	
Total of all appropriations for Office of Public Roads.....	116,460.00	
Total expenditures to Aug. 31, 1910 .....	107,628.66	
Outstanding liabilities on Aug. 31, 1910 (estimated).....	8,686.39	
Balance to be turned back in Treasury (estimated).....	144.95	







